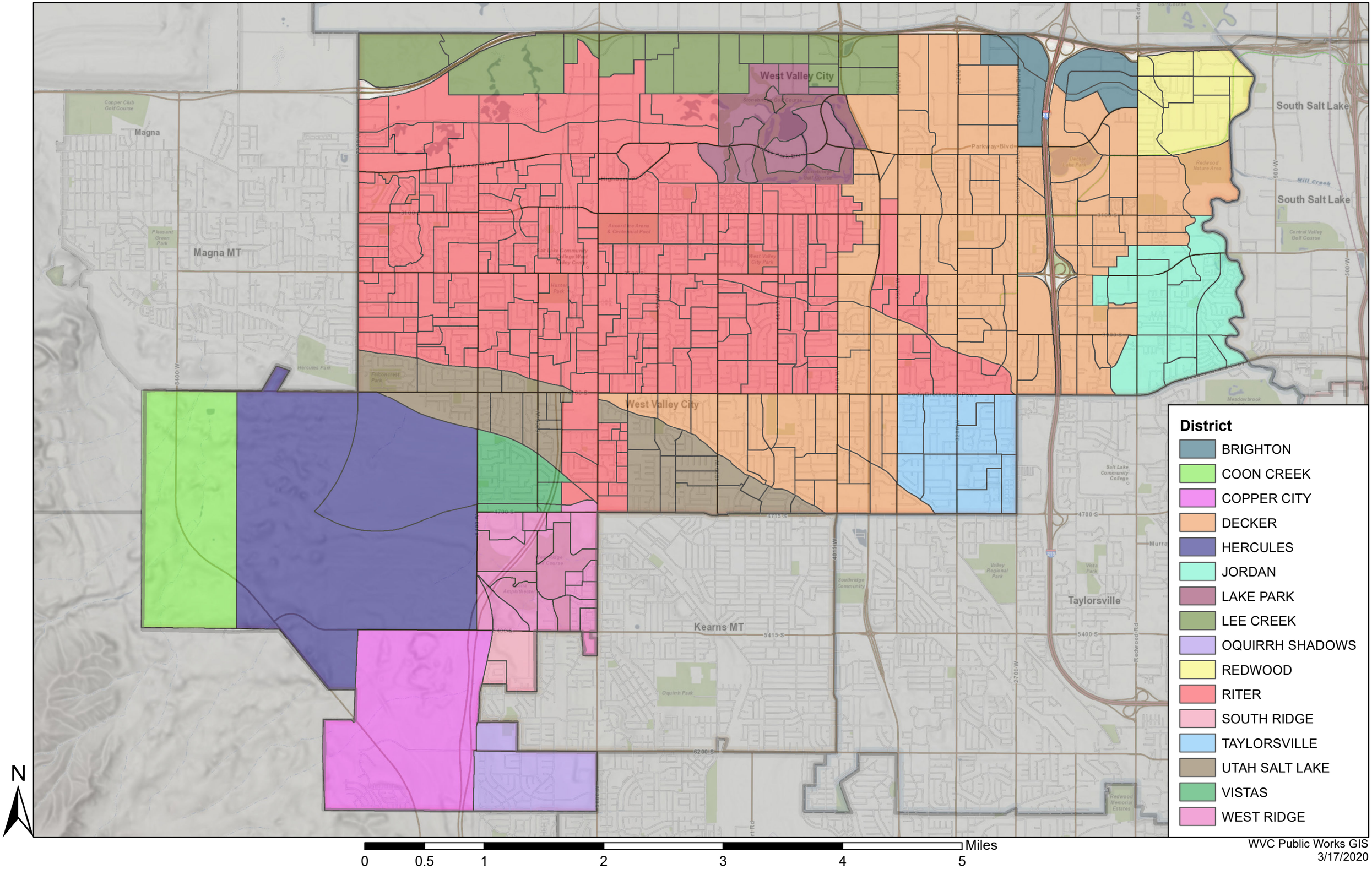
Appendix A

Maps

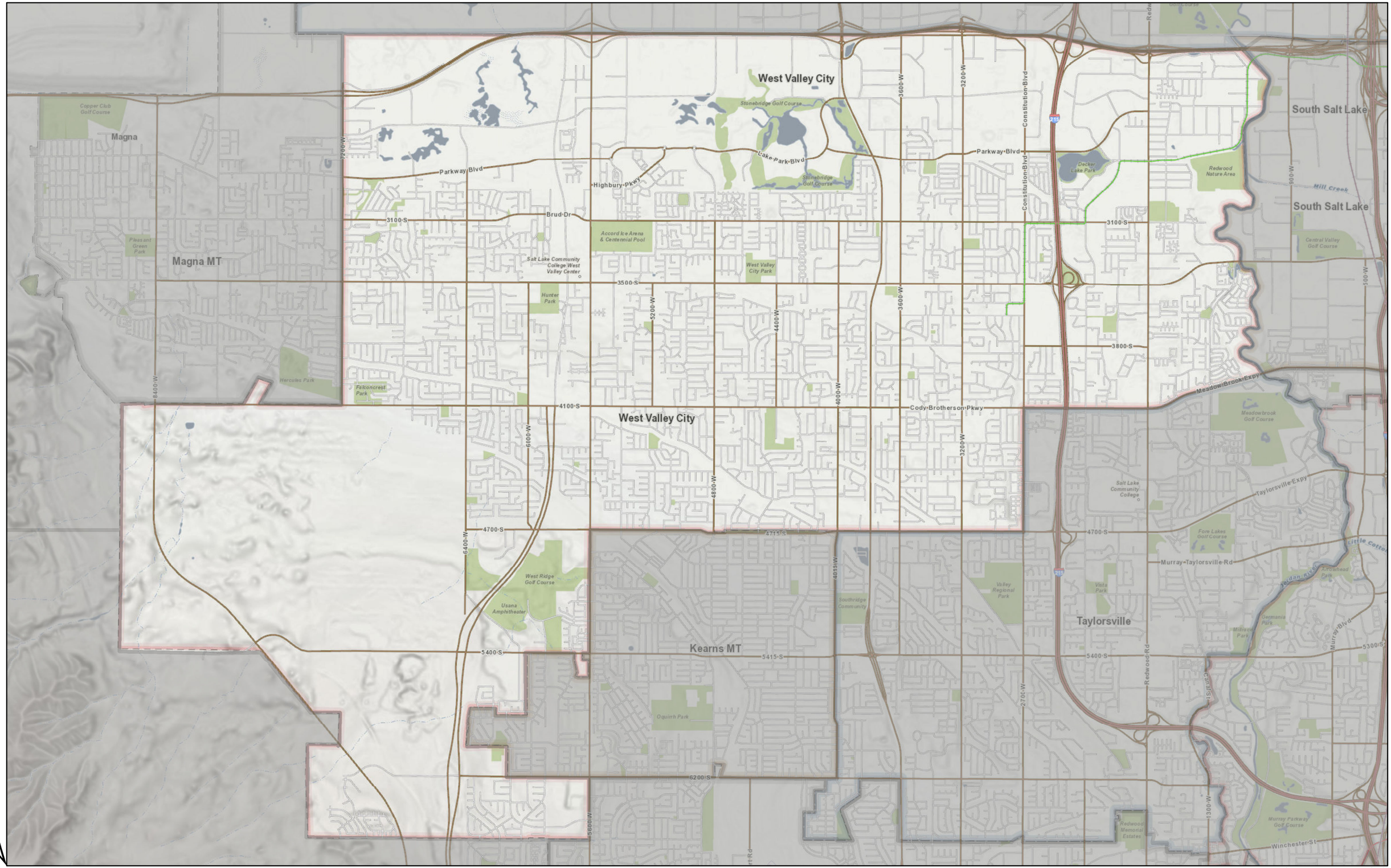
WVC Stormwater Districts
WVC Map

West Valley City Stormwater Districts



WVC Public Works GIS
3/17/2020

West Valley City



WVC Public Works GIS
3/24/2020

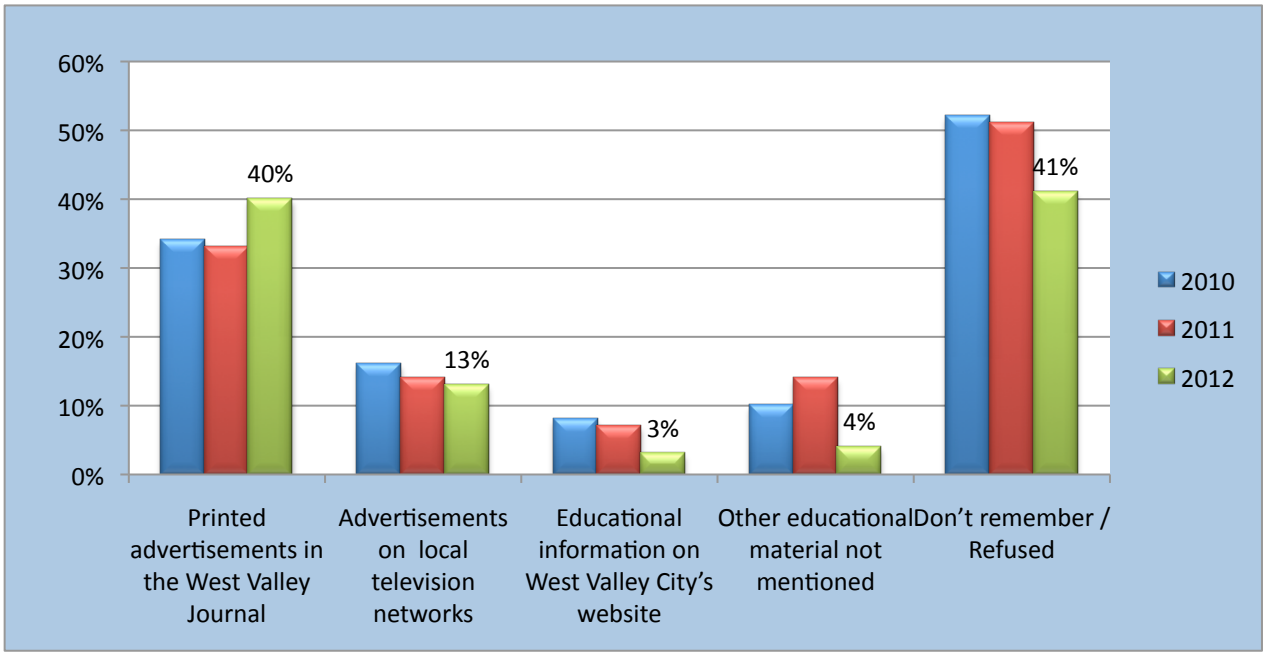
Appendix B

Public Education and Outreach

2010-2012 Survey Question Response
Monthly Inserts – upcoming and throughout permit period
2020 Survey Questions and Response – upcoming

Q38. West Valley City uses a portion of stormwater fees collected to educate the public. In the past year, have you seen any of the following stormwater education pieces?

	2010	2011	2012
Printed advertisements in the West Valley Journal	34%	33%	**40%**
Advertisements on local television networks	16%	14%	**26%**
Educational information on West Valley City's website	8%	7%	**3%**
Other educational material not mentioned	10%	14%	**4%**
Don't remember / Refused	52%	51%	**41%**



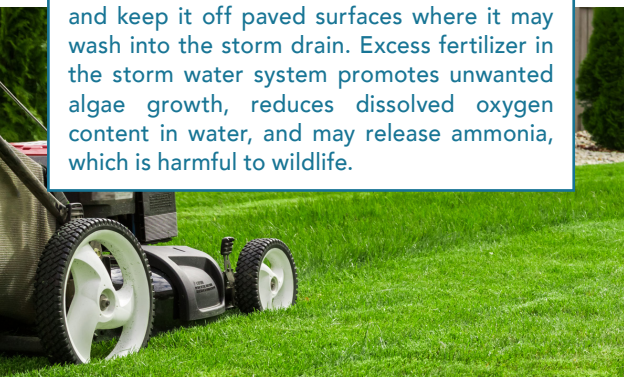
Help Prevent Storm Water Pollution

Wash Your Car Responsibly

Washing your car at home can send detergents and other contaminants through the storm drain system. Instead, take your car to a commercial car wash, where the dirty water is recycled, preventing the contaminants from entering the storm water system. If you do choose to wash your car at home, wash it on a lawn or gravel driveway - the soil will filter out most pollutants.

Keep Grass Clippings and Fertilizer on the Lawn

Sweep up your grass clippings or mulch them back into the lawn; never put them in the gutter or streets. Fertilize only when needed, and keep it off paved surfaces where it may wash into the storm drain. Excess fertilizer in the storm water system promotes unwanted algae growth, reduces dissolved oxygen content in water, and may release ammonia, which is harmful to wildlife.



Pick Up After Your Pet

Pick up your pet's waste and prevent it from being carried into the storm drain. Pet waste is full of bacteria that is harmful to people.

wvc-ut.gov/stormwater

WEST VALLEY CITY
Storm Water Utility

Appendix C

IDDE

West Valley City Storm Water Enforcement Personnel
Spill Response Plan Flow Chart
Sanitary Sewer Response Plan – TBID
Sanitary Sewer Response Plan – Kearns ID
Sanitary Sewer Response Plan – GHID
Sanitary Sewer Response Plan – Magna Water

WEST VALLEY CITY
Unity Pride Progress

Public Works Administration

MEMO

TO: Eric Bunderson, City Attorney
FROM: Russ Willardson, P.E., Public Works Director

CC: Dan Johnson, P.E., City Engineer
Brad Taylor, P.E., Assistant City Engineer

DATE: July 9, 2020

RE: STORM WATER AND FUGITIVE DUST ENFORCEMENT

Please find listed below, Public Works personnel I designate to have authorization to enforce West Valley City's Storm Water Ordinance, as well as Section 24-23-101, Fugitive Dust Health Ordinance.

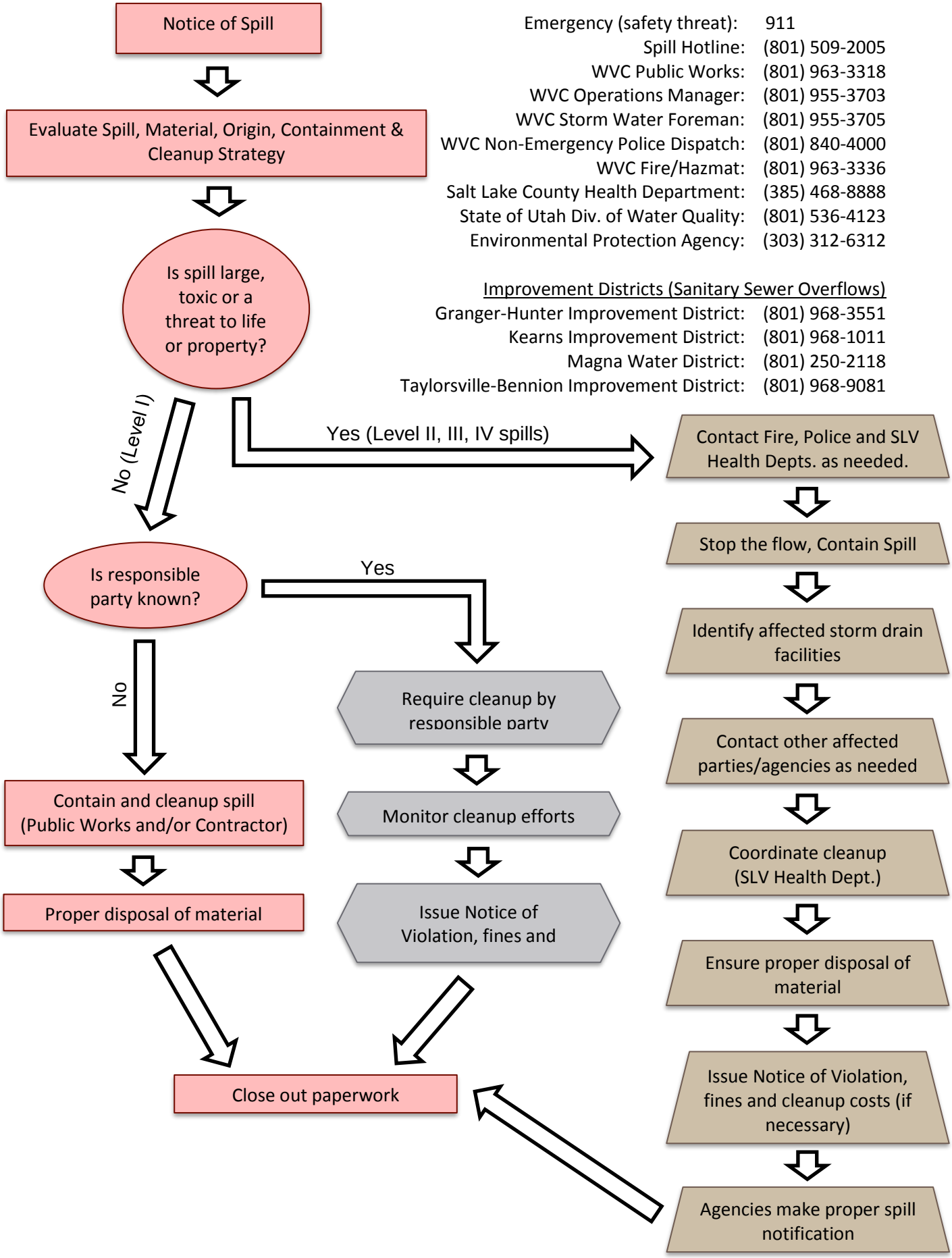
1. Robert Zito
2. Randy Peterson
3. Ryan Ramirez
4. Michael Ferguson
5. Brad Taylor

West Valley City Public Works
Spill Response Plan Flow Chart

Emergency (safety threat):	911
Spill Hotline:	(801) 509-2005
WVC Public Works:	(801) 963-3318
WVC Operations Manager:	(801) 955-3703
WVC Storm Water Foreman:	(801) 955-3705
WVC Non-Emergency Police Dispatch:	(801) 840-4000
WVC Fire/Hazmat:	(801) 963-3336
Salt Lake County Health Department:	(385) 468-8888
State of Utah Div. of Water Quality:	(801) 536-4123
Environmental Protection Agency:	(303) 312-6312

Improvement Districts (Sanitary Sewer Overflows)

Granger-Hunter Improvement District:	(801) 968-3551
Kearns Improvement District:	(801) 968-1011
Magna Water District:	(801) 250-2118
Taylorsville-Bennion Improvement District:	(801) 968-9081



TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

Sanitary Sewer Management Plan

for the Utah Sewer Management Program (USMP)

Prepared By:
Shawn Robinson
Director of Operations and Maintenance
Taylorsville-Bennion Improvement District

Revision index

This document may be revised and updated as the sewer management policies of Taylorsville-Bennion Improvement District evolve and are refined. Revisions are noted in the table below:

Revision Index Table

Revision	Date	Summary of Revisions
Original Document	October 11, 2013	
Revision	December 17, 2013	
Revisions	January 2015	Addition of Mainline and Lateral Definitions
Revisions	April 2015	Modified definition of Private Sewer Main
Adoption	April 16, 2015	Adopted by Board
Revisions	January 2020	5 Year Audit / Update

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Appendix B – TV Survey Report and Manhole Inspection Forms

Appendix C – Work Order Form

Appendix D – Defect/Damage Report

Appendix E – No Fault Utility Claims Policy

Appendix F – Backup Agreement

Appendix G – Sewage Cleanup and Restoration Process Letter

Appendix H – Sewer System Management Plan (SSMP) Annual Operating Report for TBID

Appendix I – Municipal Wastewater Planning Program (MWPP) Annual Report for the DWQ

Appendix J – TBID Wastewater Control Rules and Regulations (Sewer Ordinance)

1.0 INTRODUCTION

Taylorsville-Bennion Improvement District (TBID) is an independent water and sewer improvement district established under the laws of Salt Lake County in 1957. TBID provides sewage collection for the City of Taylorsville and parts of West Valley City and parts of unincorporated Salt Lake County. This Sewer System Management Plan (SSMP) manual has been established to provide a plan and schedule to properly manage, operate, and maintain all parts of the sewer collection system to reduce and prevent sanitary sewer overflows (SSOs), as well as minimize impacts of any SSOs that occur. The TBID management recognizes the responsibility it has to operate the sewer system in an environmentally and fiscally responsible manner. As such, this manual will cover aspects of the collection system program necessary to provide such an operation. This manual may refer to other programs or rules and regulations and by reference may incorporate these programs into this manual.

1.1 Definitions

The following definitions are to be used in conjunction with those found in Utah Administrative Code R317. The following terms have the meaning as set forth:

(1) "BMP" means "best management practice".
(2) "CCTV" means "closed circuit television.
(3) "CIP" means "Capital Improvement Plan".
(4) “DERR” means the “Department of Environmental Response and Remediation”
(5) "DWQ" means "the Utah Division of Water Quality".
(6) "FOG" means "fats, oils and grease".
(7) “GOSI” refers to a “Grease Oil and Sand Program”.
(8) "I/I" means "infiltration and inflow".
(9) “Lateral” means any sewer line conveying the wastewater of a user from a residence building or other structure to a District “mainline” sewer, including direct connections to District sewer where permitted by the District. “
(10) "Permittee" means a federal or state agency, municipality, county, district, and other political subdivision [public entity] of the state that owns or operates a sewer collection system or who is in direct responsible charge for operation and maintenance of the sewer collection system. When two separate federal or state agencies, municipality, county, district, and other political subdivision of the state are interconnected, each shall be considered a separate Permittee.
(11) “Private Sewer Main” A sewer line not located in a public way or an easement granted to the District and a sewer serving at least one property or a group of properties with agreement for common maintenance of sewer facilities.
(12) "SECAP" means "System Evaluation and Capacity Assurance Plan".
(13) "Sewer Collection System" means a system for the collection and conveyance of wastewaters or sewage from domestic, industrial and commercial sources. The Sewer Collection System does not include sewer laterals under the

ownership and control of an owner of real property, private sewer systems owned and operated by an owner of real property, and systems that collect and convey stormwater exclusively.

(14) "SORP" means "Sewer Overflow Response Plan"

(15) "SSMP" means "Sewer System Management Plan".

(16) "SSO" means "sanitary sewer overflow", the escape of wastewater or pollutants from, or beyond the intended or designed containment of a sewer collection system.

(17) "Class 1 SSO" (Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that:
   (a) affects more than five private structures;
   (b) affects one or more public, commercial or industrial structure(s);
   (c) may result in a public health risk to the general public;
   (d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or
   (e) discharges to Waters of the State of Utah.

(18) "Class 2 SSO" (Non-Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

(19) "USMP" means the "Utah Sewer Management Program".

1.2 General SSO Requirements

The following general requirements for SSOs are stipulated in Utah Administrative Code R317-801 and are included here as general information.

1) The permittee shall take all feasible steps to eliminate SSOs to include:

(a) properly managing, operating, and maintaining all parts of the sewer collection system;

(b) training system operators;

(c) allocating adequate resources for the operation, maintenance, and repair of its sewer collection system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures in accordance with generally acceptable accounting practices; and,

(d) providing adequate capacity to convey base flows and peak flows, including flows related to normal wet weather events. Capacity shall meet or exceed the design criteria of R317-3.

(2) SSOs shall be reported in accordance with the requirements below.

(3) When an SSO occurs, the permittee shall take all feasible steps to:

(a) control, contain, or limit the volume of untreated or partially treated wastewater discharged;

(b) terminate the discharge;

(c) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water; and,

(d) mitigate the impacts of the SSO.

1.3 SSO Reporting Requirement

Utah Administrative Code R317-801 stipulates when and how SSOs are reported. Following are those reporting requirements as of 10/1/2019.

SSO REPORTING. SSOs shall be reported as follows:

(1) A Class 1 SSO shall be reported orally within 24 hrs and with a written report submitted to the DWQ within five calendar days. Class 1 SSOs shall be included in the annual USMP report.

(2) Class 2 SSOs shall be reported on an annual basis in the USMP annual report.

ANNUAL REPORT. A permittee shall submit to DWQ a USMP annual operating report covering information for the previous calendar year by April 15 of the following year. The annual report TBID submits to the DWQ is called the Municipal Wastewater Planning Program (MWPP) Annual Report.

1.4 Sewer Use Rules and Regulations

TBID has Wastewater Control rules and regulations, standard details, and specifications and design requirments adopted by the governing body. These rules and standards contain the following items as stipulated by Utah Administrative Code R317-801:

1. Prohibition on unauthorized discharges,
2. Requirement that sewers be constructed and maintained in accordance with R317-3,
3. Ensures access or easements for maintenance, inspections and repairs,
4. Has the ability to limit debris which obstruct or inhibit the flow in sewers such as foreign objects or grease and oil,
5. Requires compliance with pretreatment program
6. Allows for the inspection of industrial users, and
7. Provides for enforcement of rules and regulations.

The following elements are included in this SSMP:

- General Information
- Operations and Maintenance Program
- Sewer Design Standards
- Sanitary Sewer Overflow Response Plan
- Grease, Oil and Sand Interceptor Management Program
- System Evaluation and Capacity Assurance Plan
- SSMP Monitoring and Measurement Plan
- Basement Backup Program
- DWQ Reporting Requirements

This program is intended to be a guidance document and is not intended to be part of a regulatory requirement. As such, failure to strictly comply with documentation requirements is, in and of themselves, not a failure of the program's effectiveness.

Documentation omissions are intended to be identified during system self-audits and will be addressed as training opportunities. Significant system failures will be followed up with corrective action plans. This corrective action process will be implemented by all individuals involved in the SSMP program. Not all TBID employees will necessarily be involved in the collection system operations. As such, not all employees will receive program training. Finally, although not a part of this SSMP program, TBID is an active participant in the Blue Stakes of Utah Utility Notification system. This system, regulated under title 54-8A of the Utah Administrative Code, stipulates utility notification of all underground operators when excavation takes place. The intent of this regulation is to minimize damage to underground facilities. TBID has a responsibility to mark their underground sewer facilities when notified that an excavation is going to take place. Participation in the Blue Stakes program further enhances the protection of the collection system and reduces SSO potential.

2.0 SSMP – GENERAL INFORMATION

This Sanitary Sewer Management Plan was adopted by the TBID Board of Trustees on _____April 16, 2015_____.

The responsible representatives, positions and phone numbers for Taylorsville-Bennion Improvement District with regard to this SSMP are:

Company Contact – (general information):

Shawn Robinson, Director of Operations and Maintenance
(801) 968-9081 (office)
(801) 580-6175 (cell)
shawn@tbid.org

Primary Emergency Contact:

Tom Gordon, Sewer Department Supervisor
(801) 968-9081 (office)
(801) 230-5208 (cell)
tom@tbid.org

Secondary Emergency Contact:

Jack Hutcheon, Assistant Sewer Department Supervisor
(801) 968-9081 (office)
(801) 557-2541 (cell)
jack@tbid.org

After-Hours Emergency Contact:

(801) 968-9081 (will forward to answering service)
(801) 560-4933 (after-hours cell phone)
(801) 483-3454 (answering service)

Engineer:

Tammy North, District Engineer
(801) 968-9081 (office)
(801) 560-4944 (cell)
tnorth@tbid.org

Description of Roles and Responsibilities

The following positions have the described responsibility for implementation and management of the specific measures as described in the SSMP:

General Manager. This individual is responsible for overall management of the sanitary sewer collection system. Responsibilities include working with the TBID Board of Trustees to assure sufficient budget is allocated to implement the SSMP, development of a capital improvement program and general supervision of all staff.

Director of Engineering and Development. The individual is responsible for the development and maintenance of collection system design standards, design of new sewer system infrastructure and maintenance of the SECAP program. This individual is responsible for oversight and coordination with the following: GIS Coordinator and GIS Specialist, Inspector, Legal, and CVWRF Pretreatment Coordinator.

Director of Operations and Maintenance. This individual is responsible for oversight and coordination with the following: Sewer Department Supervisor, System Controls Supervisor. Responsibilities also include adherence to the established budget and oversight of SSMP documentation.

GIS Coordinator / GIS Specialist. These individuals are responsible for collection and maintenance of sewer system mapping and any other GIS-related efforts.

Legal. The District legal counsel is responsible to provide legal review as required.

Inspector. The duties of the inspector include construction inspection for new sewer infrastructure as well as repairs to the sewer system, to ensure that construction is completed as required in the project plans and specifications as applicable and that the TBID standards are met.

Systems Controls Supervisor. This individual is responsible to coordinate lift station maintenance, SCADA system maintenance and fleet maintenance.

Sewer Department Supervisor. This individual is responsible for daily implementation of the SSMP. This includes maintenance activities, compliance with SORP requirements, coordination of the monitoring, measurement and reporting requirements, oversight of the FOG program and cost recovery program, and answering customer complaints.

Assistant Sewer Department Supervisor. This individual is responsible to assist the Sewer Department Supervisor with his/her responsibilities and to act as the Sewer Department Supervisor in their absence. This individual is also responsible to oversee Crews.

Crew 1. The responsibilities of Crew 1 include preventative maintenance in the system, sampling for the cost recovery program, CCTV inspection of sewer lines, flow monitoring, and filling in where needed to keep the other two crews going.

Crew 2. The responsibilities of Crew 2 include preventative maintenance of hot spots in the system and CCTV inspection of the sewer line hot spots.

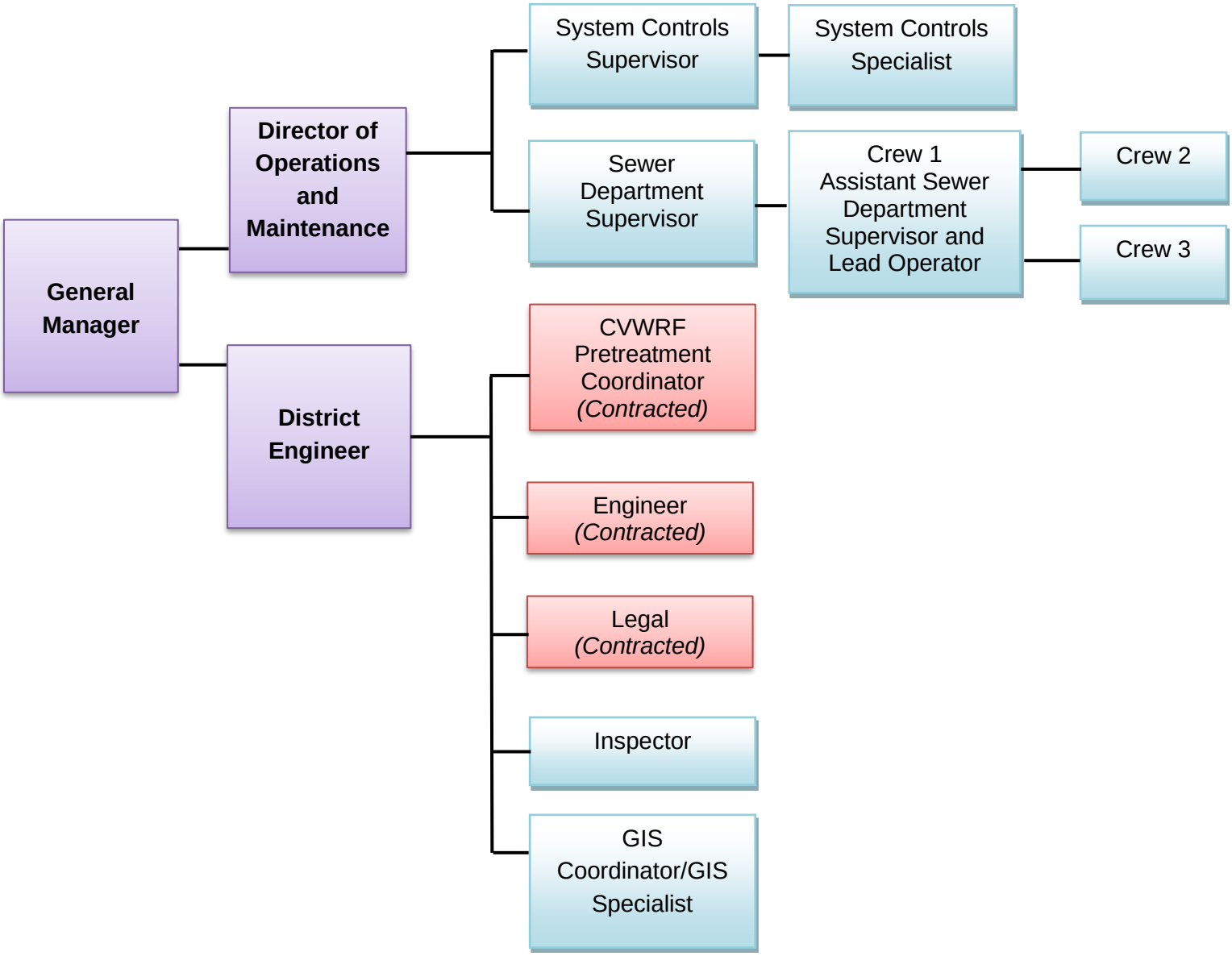
Crew 3. Crew 3 is primarily responsible for CCTV inspection of sewer lines and sewer manhole inspection.

CVWRF Pretreatment Coordinator. This individual, part of the Central Valley Water Reclamation Facility (CVWRF) staff, is responsible for coordination and implementation of the CVWRF pretreatment program.

2.1 Organization Chart

Below is the organization chart associated with the implementation of the TBID sewer system.

Figure 1 – SSMP Organization Chart



3.0 OPERATIONS AND MAINTENANCE PROGRAM

TBID has established this sanitary sewer system operations and maintenance program to ensure proper system operations, to minimize any basement backups or SSOs, and to provide for replacement, refurbishment, or repair of damaged or deteriorated piping systems. The combined maintenance program will ensure that the environment and health of the public are protected at a reasonable cost for the end users. To this end, the following areas are described and included in this maintenance program:

- System Mapping
- System CCTV Inspection
- System Cleaning
- Pump Station/Pressure Lines Inspection
- Critical Equipment List
- Manhole Inspection
- Defect Reporting
- Damage Assessment

3.1 System Mapping

An up-to-date map is essential for effective system operations. TBID maintains mapping in graphical information system (GIS) and a paper copy. When new sewer infrastructure is constructed, the Engineer generates as-built drawings in both paper and electronic versions, which are primarily kept at the District offices. The electronic versions are linked to the GIS system and are thus available to the sewer crews while in the field. The GIS Coordinator is responsible for maintaining the GIS mapping, which is synced to the field laptops used by sewer crews on a weekly basis.

Should any employee identify an error in the mapping, they will document the error on a paper copy and give it to the GIS Coordinator. Sewer system changes, repairs and inaccuracies are typically red-lined on a hard copy and given to the GIS Coordinator who then is responsible to update the GIS.

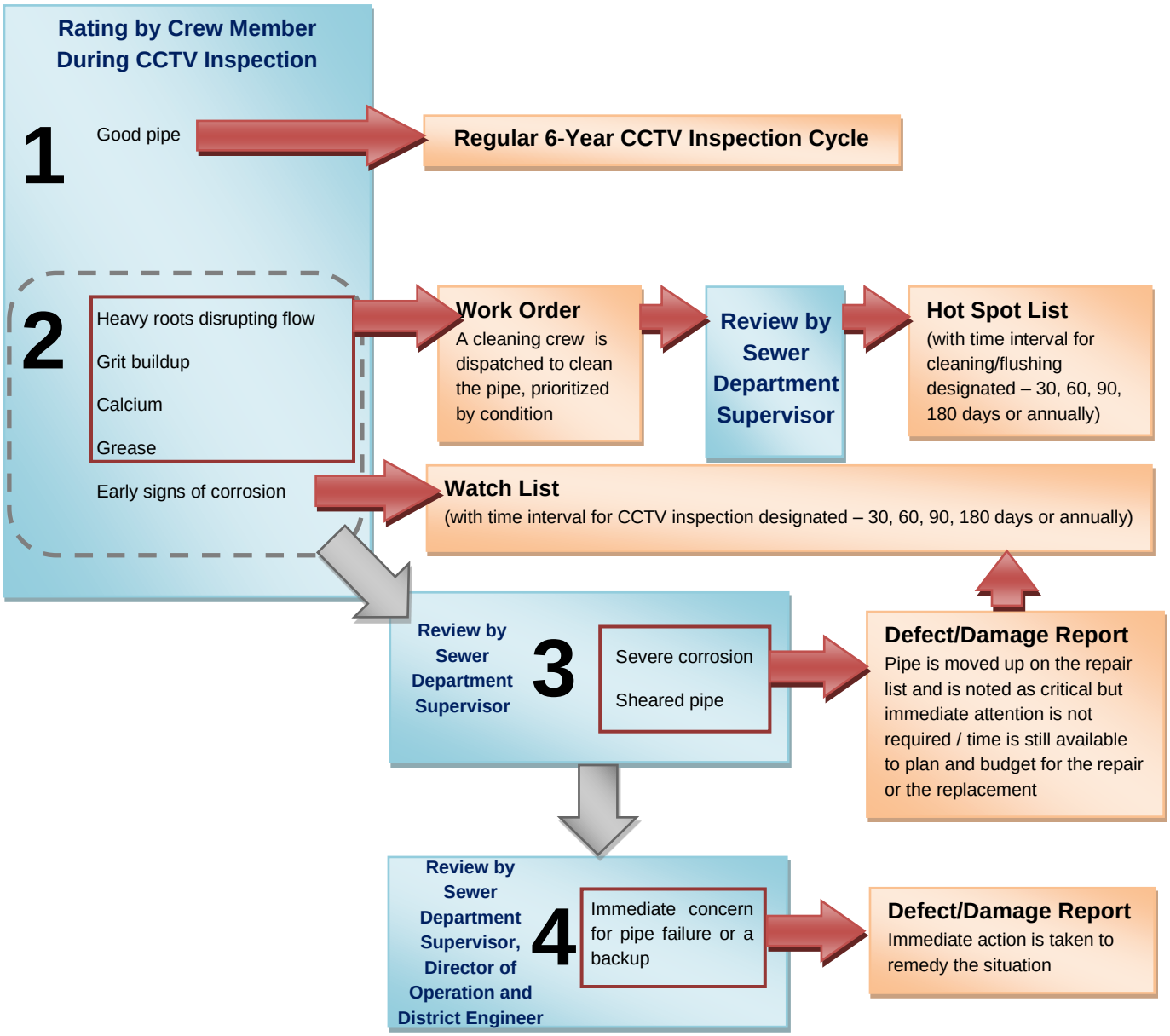
3.2 System CCTV Inspection

Closed Circuit TV inspections of the sanitary sewer system are used to assess pipe condition rating and identify lines that need to be cleaned. Generally, TBID will conduct CCTV inspection of lines less than 8” – 12” in diameter with its own staff, which represents approximately 85% of the system, and contract out inspection of lines 15” in diameter and larger. TBID does have the capability to inspect 15” and larger lines. The District typically performs CCTV inspection over the entire system in a period of 6 years, with a goal to move to a 4 to 5 year interval. “Hot spots” are CCTV inspected on an annual basis and sometimes more frequently to determine if the

maintenance approach is effective and/or to check up on its condition. The District conducts CCTV inspection every day and records the areas that have been inspected in the GIS system. Digital records are kept of all inspections.

A designated sewer crew employee inspects each line and gives it a rating according to the table below. For lines that have been CCTV inspected by a contractor, a digital record is submitted to the District and reviewed by the Sewer Supervisor.

Figure 2 – CCTV Inspection Rating System



If a line is determined to need cleaning due to heavy roots, grit building, calcium, grease or any other reason, such as nearby construction or a dumping situation, a work order (see Appendix C – Work Order Form) is generated during the CCTV inspection process. The lines needing work orders are reviewed by the Sewer Department Supervisor, who may elect to place a line with a roots or grease problem on the hot spot list so that it will receive regularly scheduled maintenance (as indicated above). When more serious damage is found by the sewer crew, such as sheared pipe or severe corrosion, the Sewer Department Supervisor will evaluate whether it should be designated as a "3" or "4" and generate a Defect/Damage Report (see Appendix D – Defect/Damage Report) for immediate action to remedy the situation or budget for it in the coming years.

The District maintains key statistical indicators to make sure that the amount of pipe inspected and cleaned aligns with the District's goals. These key indicators are assessed monthly by the Sewer Department Supervisor and reviewed by the Director of Operations and Maintenance and the General Manager.

Because the District maintains the CCTV records in a GIS/database format, a report of CCTV activities is easily generated each year for inclusion in the SECAP and SSMP reports.

3.3 System Cleaning

Historically, TBID cleaned the system line by line on a regular schedule, whether it needed it or not. After 25 years of this, it was determined that this was not the most effective method. In the last 15 years, TBID has instead taken the approach of systematically conducting CCTV inspection of the entire system, line by line, and then just cleaning the areas that need it. This has proven to be a more effective use of resources and results in a cleaner system.

Hot spots that are identified during CCTV inspection are assigned a cleaning interval, based on their condition and history – 30, 60, 90, 180 days or annually. The hot spots typically consist of areas associated with roots, grease and low spots where grit tends to accumulate.

TBID cleans 8" – 12" lines with their own staff and contracts out the cleaning of 15" and larger lines. TBID does have the ability to clean 15" and larger lines. Cleaning methods include hydraulic flushing and root saws. Chemical root control is also used. Each year a chemical root control company is contracted by TBID to come and treat any lines the crews designated with root problems. The sewer system cleaning activities are recorded in the TBID GIS system.

3.4 Pump Station/Pressure Line Inspection

TBID has two pump stations within their system. The pump stations are maintained daily by operators, including cleaning, greasing motors and couplings, and general observation that everything is running smoothly. If a problem is encountered that cannot be corrected by the operator, the Sewer Supervisor, System Controls Supervisor or System Controls Specialist is contacted to rectify the situation.

TBID has just 800 lineal feet of pressure line in this system. Included in this inspection is a visual observation of the pressure line alignment in order to insure there are no leaks.

If a problem occurs and has the potential to cause a sanitary sewer overflow, immediate action should be taken to ensure no overflow occurs. If a potential leak is identified the Sewer Department Supervisor should be notified immediatly for further action. An evaluation will be made to determine if there is an actual leak and appropriate action taken.

3.5 Critical Equipment List

The System Controls Supervisor has compiled a list of all the critical components needed to keep the 39th and Barrington Park lift stations operational. TBID has purchased spare parts or equipment for any item it has deemed critical to keep the sewer lift stations operational. The list is kept and updated by the System Controls Supervisor.

Figure 3 – Critical Equipment List

Equipment	Company	Phone Number and Notes
Generator	Wheeler Machinery	801-978-1571
50 HP TU Motor	Lakeside	Lavar Parish 630-837-5640
Parmax 9000 Gear Drive	Lakeside	Lavar Parish 630-837-5640
Coneay Upper Bearing	Lakeside	Lavar Parish 630-837-5640
Coneay Lower Bearing	Lakeside	Lavar Parish 630-837-5640
Tsurumi Pump Barrington Park	Lakeside	Lavar Parish 630-837-5640
PLC and Electrical Work	ID Electric	Lance Weeks 801-599-7790 Doug Edwards 801-455-8639
Crane Service	Wagstaff Crane	801-277-3820
Crane Service	Ivans Crane	435-671-2380

Construction Services	Corrio Construction	Brian White 801-864-4908

3.6 Manhole Inspection

Manhole inspection is conducted in conjunction with CCTV sewer line inspection on a 6-year system-wide inspection schedule. The manholes are inspected for surcharge and foreign objects/debris. Manholes are also evaluated for deterioration and overall condition of the structure, grade rings, loose brick, and general structural integrity as well as corrosion and condition of coatings. A manhole inspection form is completed for each manhole (see Appendix B – Manhole Inspection Form and Rating System). When a problem with a manhole is identified, a work order form is filled out and given to the Sewer Department Supervisor. All inspection records are retained for documentation of work performed in the GIS system. A manhole rehabilitation program was started in 2017 by the District. Manholes found with severe deterioration of the concrete walls are placed on a list. When the Sewer Department Supervisor determines enough manholes are available to be rehabilitated a contractor is hired to coat the inside of the manholes with an epoxy type coating.

3.7 Defect Reporting

Defect reporting is accomplished through the CCTV inspection rating system described in Figure 2 on page 10. As previously explained, items designated as a “2” in the rating system are placed on the hot spot list or watch list for more vigilant maintenance. For items designated as a “3” or “4”, the Sewer Department Supervisor prioritizes these items and makes recommendations to management to address immediately or in the coming years. Repair methods may include:

- Spot excavation repairs
- Spot band repairs
- Segment excavation replacements
- Segment lining
- Manhole rehabilitation

Unless additional capacity is needed, segment lining is generally the recommended repair. Each year, defect reports are used in the budget process to determine what financial allocation will be made in the next budget year. The District maintains a 20-year plan that earmarks funds for repairs and defects to ensure that there are adequate funds available in the future to make the corrections that are needed.

3.8 Collection System Damage

Collection damage may occur as a result of multiple factors, some identified as a result of inspection activities and some identified as a result of damage by third parties such as contractors. In such a case, the third party will be liable for costs resulting from the damage.

3.8.1 Damage Identification

The identification of system damage which may result in an SSO or basement backup is important to prevent environmental, public health, or economic harm. Identification of damage may be from either internal activities or external activities.

Internal activities which may result in the identification of damage include the following:

1. Collections maintenance activities
2. CCTV inspection activities
3. Manhole inspection activities

These three activities are discussed in this Maintenance Program and the identification of damage will result in the generation of a work order. Generally, damage identification is an iterative and continuous process.

External activities which identify damages include:

1. Contractor notification of damage
2. Directional drilling notification of damage
3. Public damage notifications

These notifications require immediate response. Staff should respond and evaluate the seriousness of the damage and the effect on the environment.

- Damages which include a release to the environment should be handled in accordance with the SORP.
- Damages which cause a basement backup should trigger the Basement Backup program.
- Damages which occur and remain in the trench should be minimal and do not require more action than a repair.

Whatever the cause of collection system damage, the response should be expeditious to prevent environmental or economic harm. District staff should consider all damages an emergency until it is shown by inspection to be a lower priority.

3.8.2 Damage Response Actions

When damages occur in the collection system, the following actions help define the path staff should take. These action plans are not inclusive of all options available but are indicative of the types of response that may be taken.

Stable Damage. Inspection activities may show a system damage which has been there for an extended period of time. Such damage may not require immediate action but may be postponed for a period of time. When stable damage is identified and not acted upon immediately, a defect report should be prepared. If such a defect is identified and repaired immediately, a defect report is not needed. An example of stable damage could be a major crack in a pipeline or a severely misaligned lateral connection where infiltration is occurring.

Unstable Damage. Unstable damage is damage which has a high likelihood that failure will occur in the near future. Such damage may be a broken pipe with exposed soil or a line which has complete crown corrosion. In these cases, action should be taken as soon as there is a time, a contractor, materials and other necessary resources available. When such unstable damage is identified, if possible, consideration should be given to trenchless repairs which may be able to be completed more quickly than standard excavation. Immediately after identification, the Sewer Supervisor should be notified.

Immediate Damage. Immediate damage is damage to a line that is no longer capable of functioning as a sewer line and must be handled immediately. Such damage allows untreated wastewater to pool in the excavation site, spill into the environment or possibly back up into a basement. Under such conditions priority will be given to an immediate repair. Since excavation damage may be a result of contractor negligence or it could be an oversight by TBID to adequately protect the line by appropriately following the Damages to Underground Utilities Statute 54-8A, priority should be given to effecting a repair and not to determining the eventual responsible party.

As is evidenced from the above action plans, priority should always be preventing SSOs and attendant environmental damage, to prevent basement backups and financial impacts, and to prevent public health issues.

4.0 SEWER DESIGN STANDARDS

Included in Appendix A are the sanitary sewer design standards for TBID. These design standards are intended to be used in conjunction with Utah Administrative Code R317-3. Where a conflict exists between these two standards, the Administrative Code shall prevail. These Sanitary Sewer designs may be updated from time to time. For the most up to date Sewer Design Standards refer to the TBID website at www.tbid.org.

5.0 SEWER OVERFLOW RESPONSE PLAN

Whenever sanitary sewage leaves the confines of the piping system, immediate action is necessary to prevent environmental, public health or financial damage from occurring. In addition, quick action is normally needed to mitigate damage which may have already occurred. For the purpose of this section, the following are part of the emergency action plan.

- Basement backups
- Sanitary sewer overflows
- Sanitary sewer breaks which remain in the trench
- Sewer lateral backups

All of the above conditions are likely to cause some damage. Each should be treated as an emergency, and corrective actions taken in accordance with TBID directions.

Basement backups and sanitary sewer overflows should be reported immediately based on whether they constitute a Class 1 or Class 2 SSO. As stated in the definition section of the SSMP Introduction, a Class 1 SSO is an overflow which affects more than five private structures; affects a public, commercial or industrial structure; results in a significant public health risk; has a spill volume more than 5,000 gallons; or has reached Waters of the State. All other overflows are Class 2 SSOs. All Class 1 SSOs should be reported immediately. Class 2 SSOs should be documented and reported in the annual SSMP report and included in the "Municipal Wastewater Planning Program Annual Report" submitted to the State.

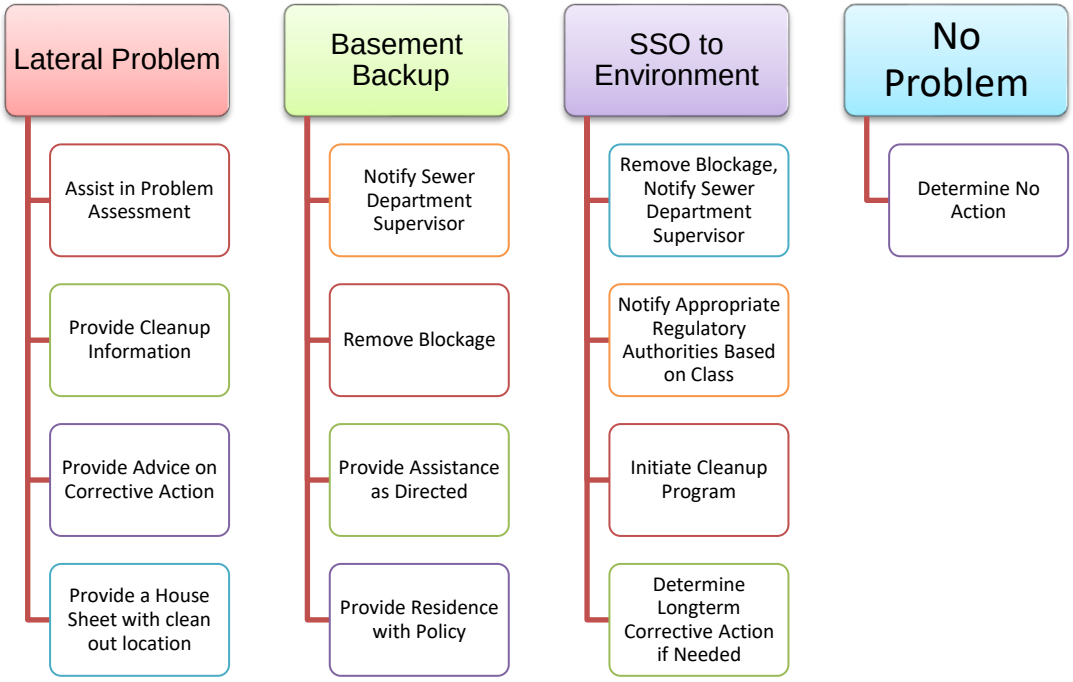
Sanitary sewer breaks which remain in the trench may be reported to the local health department if, in the opinion of the responsible staff member, there is potential for a public health issue. An example of where a public health issue may be present is when an excavator breaks both a sewer and a water line in the same trench. In such cases, the local health department representatives should be contacted and the situation explained. If the health representative requests further action on the part of the TBID, staff should try to comply. If, in the opinion of the responsible staff member, the health department request is unreasonable, management should be immediately notified. Care should always be taken to error on the side of protecting public health over financial considerations. When a basement backup occurs, the staff member responding should follow the "Basement Backup Program" procedures.

Lateral backups, while the responsibility of the property owner, should also be treated as serious problems. Care should be taken to provide advice to the property owner in such cases, but the property owner is ultimately the decision maker regarding what action should be taken.

5.1 Response Activities

There are specific steps that should be followed once a notification is received of an overflow. The following figure outlines actions that could be taken by a sewer crew when TBID receives notice that a possible overflow has or is occurring.

Figure 4 – Action Taken By Sewer Crew upon Notification of SSO



When a Class 1 SSO occurs, specific notification requirements are needed. In such cases the following notification procedure should be followed and documented. Failure to comply with notification requirements is a violation of Utah Administrative Code R317-801.

5.2 Agency Notification Requirements

Both the State of Utah Division of Water Quality and the local health department should be immediately notified when an overflow is occurring. Others that may require notification include local water suppliers and affected property owners. Notification may be required to Utah Division of Emergency Response and Remediation if hazardous materials are involved. The initial notification must be given within 24 hours, however, attempts should be made to notify them as soon as possible. A notification form is provided on page 20 to document notification activities. After an SSO has occurred and cleanup completed, a written report of the event should be submitted to the State DEQ within five days (unless waived). This report should be specific and

should be inclusive of all work completed. If possible, the report should also include a description of follow-up actions such as modeling or problem corrections that has or will take place.

5.3 Public Notification

When an SSO occurs and the extent of the overflow is significant and the damage cannot be contained, the public may be notified through proper communication channels. Normally the local health department will coordinate such notification. Should management of TBID need to provide notification, it could include press releases, publication in an area paper, and leaflets delivered to homeowners or citizens in the area of the SSO. Notification should be sufficient to ensure that the public health is protected. When and if federal laws are passed concerning notification requirements, these legal requirements are incorporated by reference in this document. In general, notification requirements should increase as the extent of the overflow increases.

5.4 Overflow Cleanup

When an overflow occurs, care should be taken to clean up the environment to the extent feasible based on available technology. Cleanup could include removal of contaminated water and soil saturated with wastewater and toilet paper, disinfection of standing water with environmentally adequate chemicals or partitioning of the affected area from the public until natural soil microbes reduce the hazard. Cleanup is usually specific to the affected area and may differ from season to season. As such, this guide does not include specific details about cleanup. The responsible staff member in conjunction with the State DEQ, the local health department and the owner of real property should direct activities in such a manner that they are all satisfied with the overall outcomes. If, during the cleaning process, the responsible staff member believes the State or the County is requesting excessive actions, the Director of Operations and Maintenance should be contacted.

5.5 Corrective Action

All SSOs should be followed up with an analysis as to cause and possible corrective actions. An SSO which is the result of grease or root plug may be placed on the hot spot list for more frequent cleaning. Serious or repetitive plugging problems may require the reconstruction of the sewer lines. An overflow that results from inadequate capacity should be followed by additional system modeling and either flow reduction or capacity increase. If a significant or unusual weather condition caused flooding to be inadvertently introduced into the sanitary sewer system, the corrective action may include working with other agencies to try to rectify the problem. Finally, if a problem is not anticipated to reoccur, no further action may be needed.

Table 1 –SORP Log of Contact with Other Agencies/People

Location of SSO:_____ Date of SSO: _____

Agency	**Phone Number**	**Contact Made** (Yes/No)	**Time**	**Remarks**
Utah DWQ	(801) 536-4300			
Salt Lake Valley Health Department	(385) 468-8888 (24-hour hotline)			
Utah DERR Environmental Incidents	801-536-4123			
Unified Police Department	(801) 743-7000 (non-emergency)			
Unified Fire Authority	(801) 743-7200 (non-emergency)			
Applicable Water Agency				
US EPA Region VIII	Consult with DWQ			

Other Contacts:

Contact Made With:	**Phone Number**	**Contact Made** (Yes/No)	**Time**	**Remarks**

6.0 GREASE, OIL AND SAND MANAGEMENT PROGRAM

6.1 Purpose

The purpose of this program is to provide for the control and management of grease, oil and sand discharges for two reasons: first, so it can pass through the Central Valley Water Reclamation Facility (CVWRF) treatment plant without disruption and secondly, and to reduce interference or blockages with the TBID collection system operation.

6.2 Regulatory Authority:

Regulatory authority to implement this program is found in the Code of Federal Regulations in 40 CFR 403, General Pretreatment Regulations. State authority for the program is given in the Utah Administrative Code R317-8-8, Pretreatment.

6.3 Central Valley Water Reclamation Facility

Wastewater from TBID is collected and treated by Central Valley Water Reclamation Facility (CVWRF). CVWRF is responsible for the implementation of the approved Pretreatment Program. The CVWRF Pretreatment Coordinator, in coordination with the TBID District Engineer and TBID Sewer Supervisor, performs the following:

- Reviews new development in categorical industries and may make special pre-treatment requests.
- Periodically conducts a windshield survey of the District to ensure that all establishments in categorical industries are accounted for in the Pretreatment Program.

Due to CVWRF's capacity to handle fats, oils, grease and sand at the treatment facility, limits have not been imposed due to treatment limitations.

- CVWRF does surcharge TBID for total suspended solid, biochemical oxygen demand, and oil and grease.
- TBID passes that cost on to users who have excessive limits to minimize wear and tear on the system.
- TBID requires Pretreatment in accordance with the Central Valley Pretreatment Coordinator and Building and Plumbing Code.

6.4 Reduce Interference with Collection System Operation

TBID is responsible to ensure that there are no blockages or flow restrictions within their infrastructure that are caused by fats, oil and grease. TBID uses the Cost Recovery Program as an enforcement mechanism. As part of this program, the biochemical oxygen demand (BOD) and total suspended solids (TSS) of wastewater from commercial and industrial establishments are sampled and monitored. They are assessed a fee based on the BOD and TSS levels beyond

those of an average residence. The increased fee for higher levels of BOD and TSS serve as incentive for establishments to reduce the grease, oil and fat in their wastewater.

6.4.1 Cost Recovery Program Implementation:

As stated in the District's Wastewater Rules and Regulations, industrial and other users who discharge conventional pollutants may be subject to the imposition of surcharges and require monitoring to determine the appropriate cost recovery charges.

6.5 List of Acceptable Entities That Recycle Oil and Grease

The Utah Department of Environmental Quality (DEQ) maintains a list of entities that collect used oil. This list is available to all users who operate a grease trap. To find a used oil collection center nearest you, call the Utah Department of Health Used Oil Hotline Phone Number: 1-800-458-0145. Additionally, the Salt Lake County Health Department and Utah DEQ websites contain valuable information on used oil and its disposal:

www.slcohealth.org/programs/waterqualhazwaste/solidHazWaste/usedOil.html

www.hazardouswaste.utah.gov/Used_Oil_Section/UsedOilSection.htm

Figure 5 – List of entities that collect used oil

Company Name	Used Oil Permit #	Phone #
Rock Canyon Oil, LLC (801) 756-2000	UOP-0123	(801) 756-2000
Tri-State Oil Reclaimers Inc.	UOP-0135	(307) 349-0116
Thermo Fluids Inc.	UOP-0010	(253) 278-4110
Safety-Kleen Systems Inc.	UOP-0050	(801) 975-0742
Clean Harbors Environmental Services Inc.	UOP-0091	(801) 750-4080
Emerald Services Inc.	UOP-0084	(801) 596-4801
Sump And Trap Cleaning Inc.	UOP-0042	(801) 595-8151

7.0 SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

TBID believes that one of the keys to preventing sanitary sewer overflows is to evaluate system capacity and to monitor flows throughout the system in order to ensure that capacities are not exceeded. TBID's philosophy and practice has been to design the system with capacity such that surcharging has been a rarity over the past 50+ years. The following elements are all part of TBID's SECAP program:

1. Master Planning and Capacity Evaluation
2. Flow Monitoring
3. Surcharge Flow Analysis
4. System Improvement Prioritization
5. Capital Improvement Plan

7.1 Master Planning and Capacity Evaluation

TBID maintains a Sewer Master Plan that assesses existing and future capacity and recommends upgrades to the sewer system. Updates to the master plan contain an analysis of flow monitoring data, verification of flows, modeling of the sewer system, comparison to the field data from the previous master plan, and prediction of future flows due to development or redevelopment. Based on this, future deficiencies are identified and projects to correct the deficiencies are recommended.

The projects recommended in the Sewer Master Plan are prioritized and scheduled by year in the TBID 20-Year Plan that is updated annually. Capital funds are set aside to complete the recommended projects each year.

Periodically, a detailed study of a portion of the sewer system is completed as the need arises. This could be in response to proposed new development or to assess in greater detail a deficiency identified in the Sewer Master Plan. Such a study may include flow monitoring, field survey to verify pipe sizes and slopes, prediction of future flows, flow modeling, recommended solutions, and cost estimates.

Systems requiring additional capacity are designed for expansion based on acceptable engineering standards which comply with State of Utah regulations found in R317-3. Easements are obtained where needed and the design includes an analysis of other utilities in the vicinity that may be affected. Design review is done by the applicable regulatory agency, as appropriate.

7.2 Flow Monitoring

In the past, TBID has periodically monitored flows as part of master plan updating or a detailed study of a portion of the sewer system. The District will continue to monitor flows at various

locations throughout the system. Flow monitoring data will be used to assess capacity and to establish peak flow rates and peaking factors at different points in the system.

7.3 Surcharge Flow Analysis

If any collection subsystem is identified as having any of the following problems the system will be evaluated to determine future action. These problems are:

1. Sanitary Sewer Overflow to the Environment
2. Sanitary Sewer Break Remaining in the Trench
3. Basement Backup
4. Observed System Surcharging

Surcharges are rare in TBID's system, through continued monitoring and surveying to identify potential problems and correct them well in advance of ever reaching surcharge conditions. However, if a surcharge were to occur, a flow evaluation would be conducted. Possible conclusions and their further action are listed below. This list is not inclusive nor does it require the specific action detailed. These are given as possible examples and will be used by management to determine corrective action. If the appropriate action is determined to be a capacity increase, the project will be placed on the CIP list.

7.3.1 Flow Reduction Evaluation

Should excessive flows be identified during the surcharge analysis, the solution may be to proceed with an inflow and infiltration study with the ultimate goal of reducing flows. These flow reductions may be achieved by reconstruction of specific areas, internal spot repairs, removing illegal storm water or sump pump connections from homes or storm water systems, and system grouting. Tools used in flow reduction may include extensive in line camera inspection, smoke testing, dye testing, and increased inspection or flow monitoring. It should be noted, however, that even though inflow and infiltration is certainly a reality to some extent within TBID's system, it has not been a critical problem.

7.3.2 Foreign Objects or Obstructions

There are multiple foreign objects or obstructions which may be found in sewers. These may include objects knocked into sewers during construction, illegally placed in sewer manholes, roots, grease and soaps, bellies in piping systems, etc. Each of these problems should be found during the investigation and a plan developed to ensure the problem does not reoccur. Types of action may include increased cleaning frequency, spot repairs, greater pretreatment activity, lining of pipes, and other corrective actions which resolve the problem.

7.3.3 Allowable Surcharging

Some piping systems may be able to accept surcharges without creating problems. Such systems may be deep and surcharging occurs below the level of basements or manhole rims, or they may be in areas where there are no connections. In such cases the resolution of the observed surcharge may just be additional monitoring.

7.3.4 Revised System Modeling

Where piping system problems cannot be resolved in a less expensive way, the system may be further modeled to determine upgrade needs. Modeling should include known flow information and future projections.

7.4 System Improvement Prioritization

As mentioned previously, sewer projects are prioritized in TBID's 20-Year Plan, which is updated annually. The priority for improvement should follow the following general guidelines:

7.4.1 High Priority Projects

When there is significant potential for sanitary sewer overflows, or frequent basement backups, the improvement should be considered a high priority and funds allocated immediately to the project.

7.4.2 Medium Priority Projects

Where the problem is infrequent and the possibility exists that it may not repeat in the near future, the priority for correction is medium. Medium priority projects may be scheduled when sufficient budget is available. Should an SSO or basement backup repeat in the same area, the priority should be reclassified to high priority.

7.4.3 Low Priority Projects

Low priority projects are those that are infrequent, have a possibility to not repeat in the near future and the increased flow in the system is minimal. Low priority projects will be placed in the budget process and evaluated against other needs.

7.5 Capital Improvement Plan

The CIP is part of the TBID's budgeting process to insure sufficient revenue to address identified weaknesses in the sanitary sewer system. Items which have been identified as needing repair or replacement are placed on the CIP list and the cost for each estimated. Sources of funding should be identified for all high priority projects so that SSOs and other deficiencies do not re-occur. Forecasts of available funding for medium and low priority projects should be made to facilitate future revenue needs.

8.0 BASEMENT BACKUP PROGRAM

Basement backups are a serious impact on a home or business owner. As such, all reasonable efforts should be taken to prevent such backups from occurring. Sewer system backups are the result of several system problems. Such problems include any one or a combination of the following:

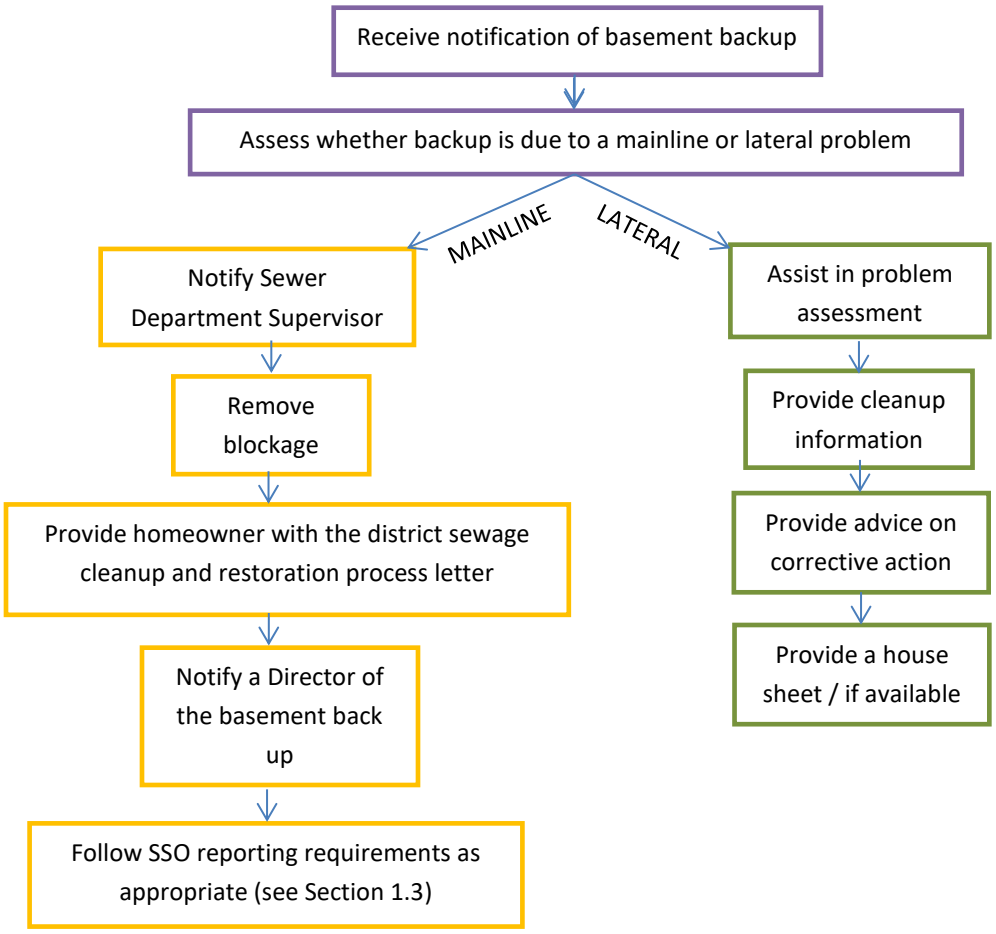
1. Laterals serving real properties are owned by the property owner and lateral maintenance is their responsibility. Roots, low points, structural failure, and grease are primary problems lateral owners face.
2. Backups caused by main line plugs are usually caused by roots, grease, low points, foreign objects and contractor negligence.
3. Piping system structural damage may cause basement backups. Such structural problems include deterioration, installation, excavation and trenchless technology damage.
4. Excess flow problems may surcharge a piping system and cause backups into homes. Excess flows usually occur when major storm waters enter into sanitary sewers not designed for such flow. In addition, some homeowners may illegally connect foundation drains and sump pumps to the sanitary sewer system.

8.1 Basement Backup Response

When TBID is notified about a basement backup, staff will record the complaint on the customer account, then generate a work order and/or contact sewer department.

All complaints of backup shall be investigated. If the investigation determines that the cause of the backup is only in the lateral of the homeowner or business, staff may offer technical information to the effected party but should not take responsibility for cleanup or subsequent restoration.

Figure 6 – Action Taken by Sewer Crew upon Notification of Basement Backup



When it is determined that the basement backup is the result of a mainline problem, TBID will remove the blockage and follow the policy approved by its governing authority. The homeowner or business will be provided with the District Sewage Cleanup and Restoration Process Letter (see Appendix G -- Sewage Cleanup and Restoration Process Letter). It should be noted that all action TBID takes are on a no-fault basis. TBID does not accept liability nor does it waive its governmental immunity.

8.2 Backup Prevention Design Standard

TBID promotes system designs which minimize backups and insure proper operations. To this end TBID has a design standard for all system construction. In addition, TBID complies with state design standards contained in Utah Administrative Code R317-3. For laterals, the following

policy applies: a lateral is considered homeowner's property and is their responsibility to maintain it to the point where it connects to the district's sewer.

8.3 Policy on the Installation of Backflow Valves

8.3.1 Reference Regulatory Documents:

Taylorsville City is the enforcing entity for installation of backflow valves. The following regulations are referenced in the establishment of this policy:

- Utah Code Title 15A-2-103(c). This code section adopts the current edition of the International Plumbing Code.
- The 2018 International Plumbing Code, section 715 Sewage Backflow.

8.3.2 Taylorsville City Policy:

- The State of Utah has adopted the International Plumbing Code (IPC) as its plumbing building standard;
- City of Taylorsville use the IPC as their statute for plumbing construction and installation;
- And the IPC requires the installation of a sewage backwater valve "where the overflow rim of the lowest plumbing fixtures are below the next upstream manhole in the public sewer."

Therefore, for new construction, Taylorsville City requires the installation of backwater valves as stipulated by the IPC already propagated for all new construction.

8.4 No-Fault Sewage Backup Claims Program

TBID adopted a No-Fault Utility Claims Policy. The policy is included herein in Appendix E and may be modified as needed.

9.0 SSMP MONITORING AND MEASUREMENT PLAN

9.1 Purpose:

The purpose of this plan is to provide appropriate monitoring and measurement of the effectiveness of the SSMP in its entirety.

9.2 Records Maintenance

TBID intends to maintain appropriate records on operations and maintenance of the sanitary sewer system to validate compliance with this SSMP. However, failure to meet standards set by State DWQ or other regulatory agency during an inspection does not constitute a violation of the SSMP. Rather, deficiencies identified during inspections should be viewed as an opportunity for improvement.

9.3 Operations Records

Operations records that should be maintained include the following:

- Daily cleaning records
- CCTV inspections records
- Manhole inspection records
- Hot spot maintenance list
- Spot repairs
- Major repairs
- System capacity information
- SSO or basement backup records including notification documents to appropriate agencies (call logs, etc.)
- Capital Improvement Plan

Records will be maintained by the Sewer Department Supervisor in a central location. Records may be maintained either on an electronic record or as a paper record. The extent of the record should be sufficient to demonstrate the activity recorded was completed appropriately.

9.4 Performance Measurement (Internal Audit)

An internal audit report should be prepared annually which comments on the following:

- Success of the operations and maintenance program
- Success of other SSMP elements
- Adequacy of the SECAP evaluations
- Discussion of SSOs and the effectiveness of the response to the event including corrective action
- Review of Defect reports and adequacy of response to eliminate such defects
- Opportunities for improvement in the SSMP or in SSO response and remediation

The annual audit report need not be extensive or long. It should, however be sufficient to document compliance with the standards set in the SSMP. The audit reports should be maintained in accordance with TBID's records retention schedule.

9.5 SSMP Updates

When a plan deficiency is identified through an audit, inspection or plan review, and the deficiency requires an SSMP update, the plan may be updated at the discretion of the District management. SSMP updates should be recorded in a revision index on page ii of this document.

9.6 SSO Evaluation and Analysis

At least annually in the internal audit and more frequently as needed, TBID will evaluate SSO trends based on frequency, location and volume.

9.7 Public Communication and Outreach

TBID may reach out to the public about the development, implementation and performance of the SSMP. This communication may be accomplished by any of the following methods:

- Public hearings
- Public meetings
- Newsletters
- Direct mailing
- Leaflets
- Other effective methods
- District website

TBID will accept comments, either written or verbal and will review such comments for applicability. Public interest may be difficult to generate, but should be sought, none-the-less.

10.0 DWQ REPORTING REQUIREMENTS

In Utah Administrative Code R317-801-4, it states that a permittee shall submit to DWQ a USMP annual operating report covering information for the previous calendar year by April 15 of the following year. It is the understanding of the District that this report is required to contain a brief summary of collection system activities, changes, improvements and all leaks, spills, fish kills or other “adverse incidents” or any other violation of the Utah Clean Water Act.

TBID uses the Municipal Wastewater Planning Program (MWPP) Annual Report to fulfill this requirement. TBID also fills out and reviews an SSMP Annual Operating Report for its own records.

APPENDIX A:
Sewer Design Standards

APPENDIX B:

TV Survey Report and Manhole Inspection Form and Rating System

APPENDIX C:
Work Order Form

APPENDIX D:
Defect/Damage Report

APPENDIX E:

No Fault Utility Claims Policy

APPENDIX F:
Backup Agreement

APPENDIX G:

Sewage Cleanup and Process Restoration Letter

APPENDIX H:

Sewer System Management Plan (SSMP) Annual Operating Report for TBID

APPENDIX I:

Municipal Wastewater Planning Program (MWPP) Annual Report for the DWQ

APPENDIX J:

TBID Wastewater
Rules and Regulations
(Sewer Ordinance)

SANITARY SEWER MANAGEMENT PLAN

May 2018

Kearns Improvement District

Operating, managing, and maintaining the KID sewer system in an environmentally and fiscally responsible manner since 1957

Sanitary Sewer Management Plan

KEARNS IMPROVEMENT DISTRICT

INTRODUCTION

The Kearns Improvement District is a local district political subdivision established in Utah under the Utah State Code. The Kearns Improvement District was established in 1957 and provides sewage collection to the customers within the Kearns Metro Township, and portions of West Jordan City, West Valley City, and Taylorsville City. This Sewer System Management Plan (SSMP) manual has been established to provide a plan and schedule to properly manage, operate, and maintain all parts of the sewer collection system to reduce and prevent SSOs, as well as minimize impacts of any SSOs that occur. The Management for this entity recognizes the responsibility it has to operate the sewer system in an environmentally and fiscally responsible manner. As such, this manual will cover aspects of the collection system program necessary to manage the sanitary sewer. This manual may refer to other programs or ordinances and by reference may incorporate these programs into this manual.

DEFINITIONS

The following definitions are to be used in conjunction with those found in Utah Administrative Code R317. The following terms have the meaning as set forth:

(1) "BMP" means "best management practice".

(2) "CCTV" means "closed circuit television.

(3) "CIP" means a "Capital Improvement Plan".

(4) "DWQ" means "the Utah Division of Water Quality".

(5) "FOG" means "fats, oils and grease". This is also referred to as a Grease Oil and Sand Program(GOSI).

(6) "I/I" means "infiltration and inflow".

(7) "Permittee" means a federal or state agency, municipality, county, district, and other political subdivision of the state that owns or operates a sewer collection system or who is in direct responsible charge for operation and maintenance of the sewer collection system. When two separate federal or state agency, municipality, county, district, and other political subdivision of the state are interconnected, each shall be considered a separate Permittee.

(8) "SECAP" means "System Evaluation and Capacity Assurance Plan".

(9) "Sewer Collection System" means a system for the collection and conveyance of wastewaters or sewage from domestic, industrial and commercial sources. The Sewer Collection System does not include sewer laterals under the ownership and control of an owner of real property, private sewer systems owned and operated by an owner of real property, and systems that collect and convey storm water exclusively.

(10) “SORP” means “Sewer Overflow Response Plan”

(11) "SSMP" means "Sewer System Management Plan".

(12) "SSO" means "sanitary sewer overflow", the escape of wastewater or pollutants from, or beyond, the intended or designed containment of a sewer collection system.

(13) "Class 1 SSO" (Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that:

(a) affects more than five private structures;

(b) affects one or more public, commercial or industrial structure(s);

(c) may result in a public health risk to the general public;

(d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or

(e) discharges to Waters of the State of Utah.

(14) "Class 2 SSO" (Non-Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

(15) "USMP" means the "Utah Sewer Management Program".

GENERAL SSO REQUIREMENTS

The following general requirements for SSO’s are stipulated in R317-801 and are included here as general information.

1) The permittee shall take all feasible steps to eliminate SSOs to include:

(a) Properly managing, operating, and maintaining all parts of the sewer collection system;

(b) Training system operators;

(c) allocating adequate resources for the operation, maintenance, and repair of its sewer collection system, by establishing a proper rate structure, accounting mechanisms, and

auditing procedures to ensure an adequate measure of revenues and expenditures in accordance with generally acceptable accounting practices; and,

(d) Providing adequate capacity to convey base flows and peak flows, including flows related to normal wet weather events. Capacity shall meet or exceed the design criteria of R317-3.

(2) SSOs shall be reported in accordance with the requirements below.

(3) When an SSO occurs, the permittee shall take all feasible steps to:

(a) control, contain, or limit the volume of untreated or partially treated wastewater discharged;

(b) terminate the discharge;

(c) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water; and,

(d) mitigate the impacts of the SSO.

SSO Reporting Requirements

R317-801 stipulates when and how SSO's are reported. Following are those reporting requirements as of 04/23/2012.

SSO REPORTING. SSOs shall be reported as follows:

(1) A Class 1 SSO shall be reported orally within 24 hours and with a written report submitted to the DWQ within five calendar days. Class 1 SSO's shall be included in the annual USMP report.

(2) Class 2 SSOs shall be reported on an annual basis in the USMP annual report.

ANNUAL REPORT. A permittee shall submit to DWQ a USMP annual operating report covering information for the previous calendar year by April 15 of the following year.

Sewer Use Ordinance

Kearns Improvement District has sewer use regulations that have been adopted by the Kearns Improvement District Board of Trustees. These regulations contain the following items as stipulated by Utah State Code R317-801:

1. Prohibition on unauthorized discharges
2. Requirement that sewers be constructed and maintained in accordance with approved standards
3. Ensures access or easements for maintenance, inspections and repairs

4. Has the ability to limit debris which obstruct or inhibit the flow in sewers such as foreign objects or grease and oil. Requires compliance with pretreatment
5. Allows for the inspection of industrial users
6. Provides for enforcement of ordinance or rules violations

The following elements are included in this SSMP:

- General Information
- Operations and Maintenance Program
- Sewer Design Standards
- Sanitary Sewer Overflow Response Plan
- Grease, Oil and Sand Interceptor Management Program
- System Evaluation and Capacity Assurance Plan
- SSMP Monitoring and Measurement Plan
- Sewer System Mapping Program
- Basement Backup Program
- No Fault Sewage Backup Claims Program

This program is intended to be a guidance document and is not intended to be part of a regulatory requirement. As such, failure to strictly comply with documentation requirements is, in and of themselves, not a failure of the program's effectiveness.

Documentation failures are intended to be identified during system self-audits and will be addressed as training opportunities. Significant system failures will be followed up with corrective action plans. This corrective action process will be implemented by all individuals involved in the SSMP program. Not all Kearns Improvement District employees will necessarily be involved in the collection system operation(s). As such, not all employees will receive program training. Finally, although not a part of this SSMP program, Kearns Improvement District is an active participant in the Blue Stakes of Utah Utility Notification system (Blue Stakes). This system, regulated under title 54-8A of the Utah State Code, stipulates utility notification of all underground operators when excavation takes place. The intent of this regulation is to minimize damage to underground facilities. Kearns Improvement District has a responsibility to mark their underground sewer facilities when notified an excavation is going to take place. Participation in the Blue Stakes program further enhances the protection of the collection system and reduces SSO's.

Kearns Improvement District
SSMP – General Information

This Sanitary Sewer Management Plan was adopted by Kearns Improvement District Board of Trustees on May 8, 2018. The responsible representatives, position, and phone number for the Kearns Improvement District with regard to this SSMP are:

Pamela Gill - General Manager	801-968-1011 ext. 215
F. Greg Anderson, P.E. - Public Works Director	801-968-1011 ext. 225
Robert Lutz, Operations & Maintenance Manager	801-968-1011 ext. 230
Blake Anderson, Engineering Manager	801-968-1011 ext. 235
Jon Crawford, Construction Manager	801-968-1011 ext. 237

Board of Trustees

Greg Christensen - Chairman

Jeff Monson- Vice Chairman

Cheryle A. Hatch - Clerk

Description of Roles and Responsibilities

The following positions have the described responsibility for implementation and management of the specific measures as described in the SSMP.

General Manager

The General Manager is responsible for overall management of the sanitary sewer collection system. Responsibilities include working with governance to assure sufficient budget is allocated to implement the SSMP, maintenance of the SSMP documentation, development of a capital improvement program, and general supervision of all staff.

Public Works Director

The Public Works Director directs and oversees the public works division and the managers related to the planning, organizing, and directing the development and maintenance of collection

system design standards, maintenance of the collection system mapping, and maintenance of the SECAP program.

Operations & Maintenance Manager

This individual is responsible for daily implementation of the SSMP. This includes maintenance activities, compliance with SORP requirements, and monitoring and measurement reporting requirements.

Engineering Manager

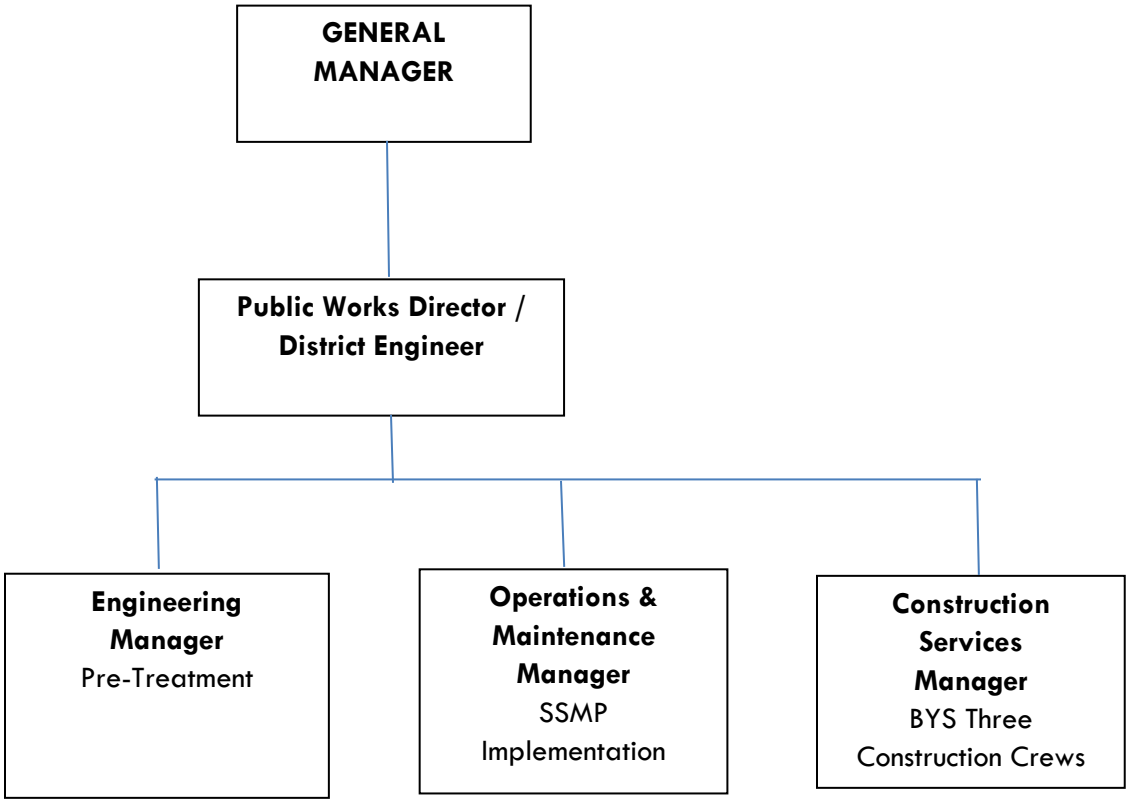
This individual is responsible for implementation of the pretreatment program including the fats, oil and grease program.

Construction Manager

This individual is responsible for the ongoing sewer main & lateral rehabilitation and replacement project.

Organization Chart

Below is the organization chart associated with the SSMP:



Kearns Improvement District
Operations and Maintenance Program

Kearns Improvement District has established this sanitary sewer system operations and maintenance program to ensure proper system operations, to minimize any basement backups or SSOs, and to provide for replacement, refurbishment, or repair of damaged or deteriorated piping systems. The combined maintenance program should ensure that the environment and health of the public are protected at a reasonable cost for the end users. To this end, the following areas are described and included in this maintenance program:

- System Mapping
- System Cleaning
- CCTV Inspection
- Manhole Inspection
- Defect Reporting
- Damage Assessment

System Mapping

An up to date map is essential for effective system operations. Kearns Improvement District has assigned the mapping responsibility to the GIS & Mapping Technician who will prepare and maintain current mapping for the entire sanitary sewer system. Mapping may be maintained on either paper or in a graphical information system (GIS) or a combination of both. Current mapping is available at the following location:

Kearns Improvement District Main Office
5350 West 5400 South
Kearns, Utah

Should any employee identify an error in the mapping, they should document the error on a defect report and give it to the GIS & Mapping Technician.

System Cleaning

Sanitary sewer system cleaning is accomplished through various means and methods. Kearns Improvement District has established a goal to clean the entire system every two years. Based on experience over the past 20 years, this frequency significantly reduces the number of basement backups, controls grease problems and flushes any bellies in the system. In addition, Kearns Improvement District has a listing of identified hot spots which are maintained at a higher frequency. Systems which may have roots are mechanically rodded, hydraulically cut out, or chemically treated, and areas where

restaurants are close together are hydraulically flushed with a high pressure jet truck. The following methods are employed to provide system cleaning:

Kearns Improvement District Hydraulic Cleaning

Kearns Improvement District Mechanical Rodding

Kearns Improvement District Chemical Root Control

Chemical FOG Control

Cleaning records are maintained at the Operations and Maintenance office of the Kearns Improvement District. Contractors are required to provide cleaning records associated with their work. Cleaning history may also be entered into the GIS; however, this is not always necessary. Should the cleaning process identify a serious defect, the problem should be reported on a Work Order Form. The Operations and Maintenance Manager should be given the work order for further action. The work order should be specific as to location and type of problem. A copy of the work order is included at the end of this narrative section. A summary of cleaning activities shall be prepared on a regular basis by the Operations and Maintenance Manager or designee. This summary will normally be presented to the Public Works Director, the General Manager, and the Board of Trustees for consideration and review.

System CCTV Inspection

Closed Circuit TV inspections of the sanitary sewer system are used to assess pipe condition and identify problems or possible future failures which need current attention. The CCTV process also identifies the piping condition to allow for replacement prior to failure. Generally, the Kearns Improvement District will conduct CCTV inspection with designated staff and equipment. Inspections of the system will occur every 5 years. This inspection frequency is based on the pipe aging process. As such, once the system has been inspected completely, change usually occurs gradually. CCTV will also be employed when a systems operation or capacity is questioned or when an SSO occurs. Any defects identified during the CCTV process should be reported on a work order form and the form should be given to the Operations and Maintenance Manager for possible repairs. Documentation of CCTV activities will be maintained at the Operations & Maintenance Division office. When contractors are employed to inspect the sanitary sewer system they will be required to submit records for their work. The Operations and Maintenance Manager will prepare an annual summary of CCTV completed for that calendar year.

Manhole Inspection

The Kearns Improvement District inspects the sewer manholes in conjunction with the cleaning and flushing of the sewer mains. The M/H inspection involves the identification of foreign objects and surcharging that may be present. Crews inspecting the manholes are given maps by the Operations and Maintenance Manager who will monitor the progress and completeness of the inspection process. When a potential defect is identified the manhole should be flagged. Flagged manholes should be checked by

an operator within a reasonable amount of time to determine further action. If, during the inspection process, the inspection crew believes a problem is imminent, they should immediately cease inspecting and inform the Operations and Maintenance Manager of the problem. A cleaning crew should be dispatched immediately to ensure correct system operations. All inspection records should be retained for documentation of work performed.

Work Orders

Work orders generated through the cleaning, CCTV inspection, or manhole inspection programs will be prioritized for correction by the Operations and Maintenance Manager. Any defects which have the potential for catastrophic failure and thus create a sanitary sewer overflow should be evaluated immediately and discussed with the maintenance crew leaders for repair. Repair methods may include:

- Spot Excavation Repairs
- Spot Band Repairs
- Segment Excavation Replacements
- Segment Lining
- Manhole Rehabilitation

When a defect is not flagged for immediate repair, it should be considered for placement on the "hot spot" list. This will allow for vigilant maintenance to ensure failure and a subsequent sanitary sewer overflow do not take place. Work orders reporting the defect should be used in the budget process to determine what financial allocation should be made in the next budget year. The Public Works Director should include outstanding defects in on-going reports.

Collection System Damage

Collection damage may occur as a result of multiple factors, some identified as a result of inspection activities and some identified as a result of damage by third parties such as contractors.

Damage Identification

The identification of system damage which may result in an SSO or basement backup is important to prevent environmental, public health, or economic harm. Identification of damage may be from either internal activities or external activities.

Internal activities which may result in the identification of damage include the following:

1. Collections Maintenance Activities
2. CCTV Inspection Activities
3. Manhole Inspection Activities

These three activities are discussed in this Maintenance Program and the identification of damage will result in the generation of a Defect Report. Generally, damage identification is an iterative and continuous process. External activities which identify damages include:

1. Contractor Notification of Damage
2. Directional Drilling Notification of Damage
3. Public Damage Complaints

All three of these notifications generally require immediate response. Staff should respond and evaluate the seriousness of the damage and the effect on the environment. Damages which include a release to the environment should be handled in accordance with the SORP. Damages which cause a basement backup should trigger the Basement Backup program. Damages which remain in the trench do not require more action than the repair of the damage.
Whatever the cause of collection system damage, the response should be expeditious to prevent environmental or economic harm. District staff should consider all damages an emergency until it is shown by inspection to be a lower priority.

Damage Response Actions

When damages occur in the collection system, the following actions help define the path staff should take. These action plans are not inclusive of all options available but are indicative of the types of response that may be taken.

Stable Damage

Inspection activities may show a system damage which has been there for an extended period of time. Such damage may not require immediate action but may be postponed for a period of time. When stable damage is identified and not acted upon immediately, a defect report should be prepared. If such a defect is identified and repaired immediately, a defect report is not needed. An example of stable damage could be a major crack in a pipeline or a severely misaligned lateral connection where infiltration is occurring.

Unstable Damage

Unstable damage is damage which has a high likelihood that failure will occur in the near future. Such damage may be a broken pipe with exposed soil or a line which has complete crown corrosion. In these cases, action should be taken as soon as there is time, a contractor, materials and other necessary resources available. When such unstable damage is identified, if possible, consideration should be given to trenchless repairs which may be able to be completed quicker than standard excavation. Immediately after identification, the Manager should be contacted to review and take care of budget considerations.

Immediate Damage

When a contractor or others damage a collection line such that the line is no longer capable of functioning as a sewer, this immediate damage must be handled expeditiously. Such damage allows untreated wastewater to pool in the excavation site, spill into the environment or possibly backup into a basement. Under such conditions, priority should be given to an immediate repair. Since excavation damage may be a result of contractor negligence or it could be a failure of the Kearns Improvement District to adequately protect the line by appropriately following the Damages to Underground Utilities Statute 54-8**A**, priority should be given to affecting a repair and not to determining the eventual responsible party.

As can be determined from the above action plans, priority should always be preventing SSO's and attendant environmental damage, to prevent basement backups and financial impacts, and to prevent public health issues.

Kearns Improvement District
Sewer Design Standards

Referenced in this section are the sanitary sewer design standards for the Kearns Improvement District. These design standards are intended to be used in conjunction with Utah Administrative Code R317-3. Where a conflict exists between these two standards, the Administrative Code shall prevail.

The Kearns Improvement District Standards are available online for review at the following address.

http://kearnsid.org/engspecs.PDF

Public Works/Engineering Specifications

Kearns Improvement District
Sanitary Sewer Overflow Action Plan

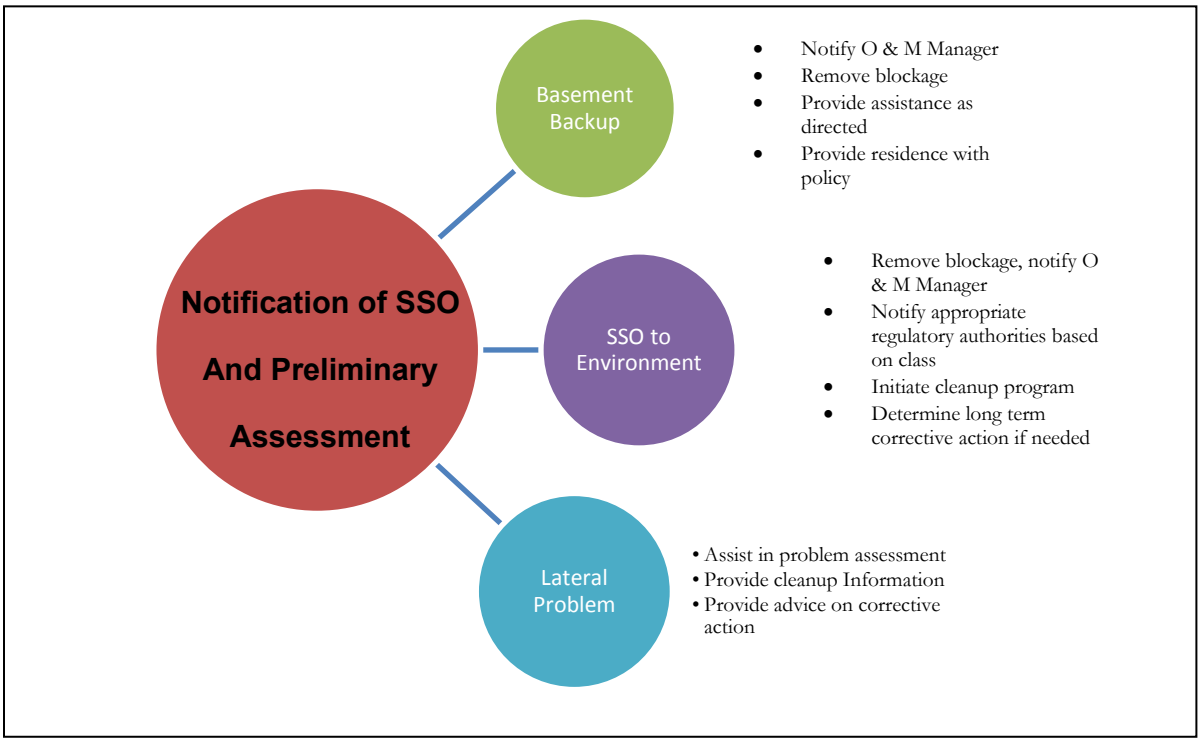
Whenever sanitary sewage leaves the confines of the piping system, immediate action is necessary to prevent environmental, public health, or financial damage from occurring. In addition, quick action is normally needed to mitigate damage which may have already occurred. For the purpose of this section, the following are part of the emergency action plan.

1. Basement backups
2. Sanitary sewer overflows
3. Sanitary sewer breaks which remain in the trench
4. Sewer lateral backups

All of the above conditions are likely to cause some damage. Each should be treated as an emergency and corrective actions taken in accordance with Kearns Improvement District directions. Items 1 & 2 above should be reported immediately based on whether they constitute a Class 1 or Class 2 SSO. As stated in the definition section of the SSMP Introduction, a Class 1 SSO is an overflow which affects more than five private structures; affects a public, commercial or industrial structure; results in a significant public health risk; has spill volume more than 5,000 gallons; or has reached Waters of the State. All other overflows are Class 2 SSO's. All Class 1 SSO's should be reported immediately. Class 2 SSO's should be documented and reported in the annual SSMP report and included in the Municipal Wastewater Planning Program submitted to the State. Item 3 may be reported to the local health department if, in the opinion of the responsible staff members, there is potential for a public health issue. An example of where a public health issue may be present is when an excavator breaks both a sewer and a water line in the same trench. In such cases, the local health department representatives should be contacted, and the situation explained. If the health representative requests further action on the part of the Kearns Improvement District, staff should try and comply. If, in the opinion of the responsible staff member, the health department request is unreasonable, the Manager should be immediately notified. Care should always be taken to err on the side of protecting public health over financial considerations. When a basement backup occurs, the staff member responding should follow the Basement Backup Program procedures. Lateral backups, while the responsibility of the property owner, should also be treated as serious problems. Care should be taken to provide advice to the property owner in such cases, but the property owner is ultimately the decision maker about what actions should be taken.

Response Activities

There are specific steps that should be followed, once a notification is received that an overflow may be occurring. The following figure outlines actions that could be taken when the Kearns Improvement District receives notice that a possible overflow has or is occurring.



General Notification Procedure

When a Class 1 SSO occurs, specific notification requirements are needed. In such cases, the following notification procedure should be followed and documented. Failure to comply with notification requirements is a violation of R317-8

Agency Notification Requirements

Both the State of Utah Division of Water Quality and the local health department should be immediately notified when an overflow is occurring. Others that may require notification include local water suppliers, affected property owners, and notification may be required to Utah Division of Emergency Response and Remediation if hazardous materials are involved. The initial notification must be given within 24 hours. However, attempts should be made to notify them as soon as possible so they can observe the problem and the extent of the issue while the problem is happening. A notification form is provided to document notification activities. After an SSO has taken place and the cleanup has been done, a written report of the event should be submitted to the State DEQ within five days (unless waived). This report should be specific and should be inclusive of all work completed. If possible, the report should also include a description of follow-up actions such as modeling or problem corrections that has or will take place.

Public Notification

When an SSO occurs, and the extent of the overflow is significant, and the damage cannot be contained, the public may be notified through proper communication channels. Normally the local health department will coordinate such notification. Should the Kearns Improvement District need to provide notification, it could include press releases to the local news agencies, publication in an area paper, and leaflets delivered to home owners or citizens in the area of the SSO. Notification should be sufficient to ensure that the public health is protected. When and if Federal laws are passed concerning notification requirements, these legal requirements are incorporated by reference in this document. In general, notification requirements should increase as the extent of the overflow increases.

Overflow Cleanup

When an overflow happens, care should be taken to clean up the environment to the extent feasible based on technology, good science and financial capabilities. Cleanup could include removal of contaminated water and soil saturated with wastewater and toilet paper, disinfection of standing water with environmentally adequate chemicals, or partitioning of the affected area from the public until natural soil microbes reduce the hazard. Cleanup is usually specific to the affected area and may differ from season to season. As such, this guide does not include specific details about cleanup. The responsible staff member in conjunction with the State DEQ, the local health department, and the owner of real property, should direct activities in such a manner that they are all satisfied with the overall outcomes. If, during the cleaning process, the responsible staff member believes the State, or the local health department, is requesting excessive actions, the Manager should be contacted.

Corrective Action

All SSO's should be followed up with an analysis as to cause and possible corrective actions. An SSO which is the result of grease or root plug may be placed on the preventative maintenance list for more frequent cleaning. Serious or repetitive plugging problems may require the reconstruction of the sewer lines. An overflow that results from inadequate capacity should be followed by additional system modeling and either flow reduction or capacity increase. If a significant or unusual weather condition caused flooding

which was introduced to the sanitary sewer system incorrectly, the corrective action may include working with other agencies to try and rectify the cross connection from the storm sewer to the sanitary sewer or from home drainage systems and sump pumps. Finally, should a problem be such that it is not anticipated to reoccur, no further action may be needed.

Kearns Improvement District
Grease, Oil and Sand Management Program

Purpose

The purpose of this program is to provide for the control and management of grease, oil and sand discharges to the District collection system. This program will provide a means to reduce interference with the collection system operation and pass through at the treatment plant.

Regulatory Authority

Regulatory authority to implement this program is found in the Code of Federal Regulations in 40 CFR 403, General Pretreatment Regulations. State authority for the program is given in the Utah Administrative Code R317-8-8, Pretreatment. Local authority is found in the Kearns Improvement District Engineering & Construction Specification Section 3.3.10.

Program Implementation

This program shall be implemented in such a manner as to minimize the impact on businesses which may be affected by this program. In all cases the Kearns Improvement District will maintain a uniform decision-making process. Kearns Improvement District shall allow for appeals of program requirements in accordance with the appeal process approved by Kearns Improvement District. The following steps detail the procedure that Kearns Improvement District personnel shall follow in implementing this program.

Evaluation

The Kearns Improvement District staff will evaluate an industrial user (IU) discharge to determine if grease, oil or sand management is required at the following events:

1. During the engineering plan review process.
2. When the collection line in front of the business is CCTV inspected as part of the sanitary sewer system preventative maintenance program.
3. When a downstream sanitary sewer pipeline plugs due to oil, grease or sand.

No further action will be taken if it is determined that no potential exists for significant enrichment of the wastewater with grease, oil or sand. Enrichment is defined as a discharge with greater volume or concentration of grease, oil or sand than that discharged from a typical residential connection. For oil and grease, the typical residential discharge has less than 100 mg/L of oil and grease for any sample taken. Greater concentrations would be enrichment. Also, a significant buildup of oil and grease in the lateral would indicate enrichment. Sand and dirt are not typically discharged from a residential connection. Any potential for sand or dirt discharge would be enrichment.

Implementation

IU's which are determined to enrich or have the potential to enrich the wastewater with grease, oil, or sand will be required to develop a management plan in accordance with the following tracks:

Track 1

This track is available for IU's which exist at the time of program implementation. However, not all existing IU's may be permitted to use it. Determination will be made on a case by case basis. IU's on this track will be permitted to pay a contractor to clean the main sewer line from their place of business to the nearest trunk line, upon notifying the Kearns Improvement District. A trunk line is any sewer line which has an inside diameter of eighteen inches or larger or has been classified as a trunk line by the Kearns Improvement District. Cleaning frequency will be determined by inspections performed by the Kearns Improvement District.

Track 2

This track requires the IU to install and maintain a grease, oil and/or sand trap on their premises. Quarterly cleaning reports may be required at the discretion of the Kearns Improvement District. The Kearns Improvement District shall inspect the grease trap on a periodical basis. Should the testing reveal grease and oil the IU will be ordered to return to compliance immediately. A re-inspection will be done within thirty days, if the trap has not been cleaned, a fine will be assessed to the IU. The IU will also be ordered to return to compliance immediately. Retesting will be done within thirty days, if the trap has not been cleaned and a cleaning report submitted, another fine will be assessed.

By following the steps discussed above, the Kearns Improvement District hopes to maintain a collection system free from excessive backups and a treatment plant in compliance with UPDES discharge conditions.

List of Acceptable Entities That Recycle Oil and Grease

The following list of grease and oil recyclers should be given to all IU's who operate a grease trap. This list may not be all inclusive. Other recyclers may be used if it can be shown that they discharge the waste appropriately.

Recycler	Phone Number	Address
Renegade Oil	801-973-7912	1141 S. 3200 W, SLC, Utah 84104
Emerald Services	801-973-4131	2450 S. 800 W, SLC, Utah 84119

Kearns Improvement District
System Evaluation and Capacity Assurance Plan

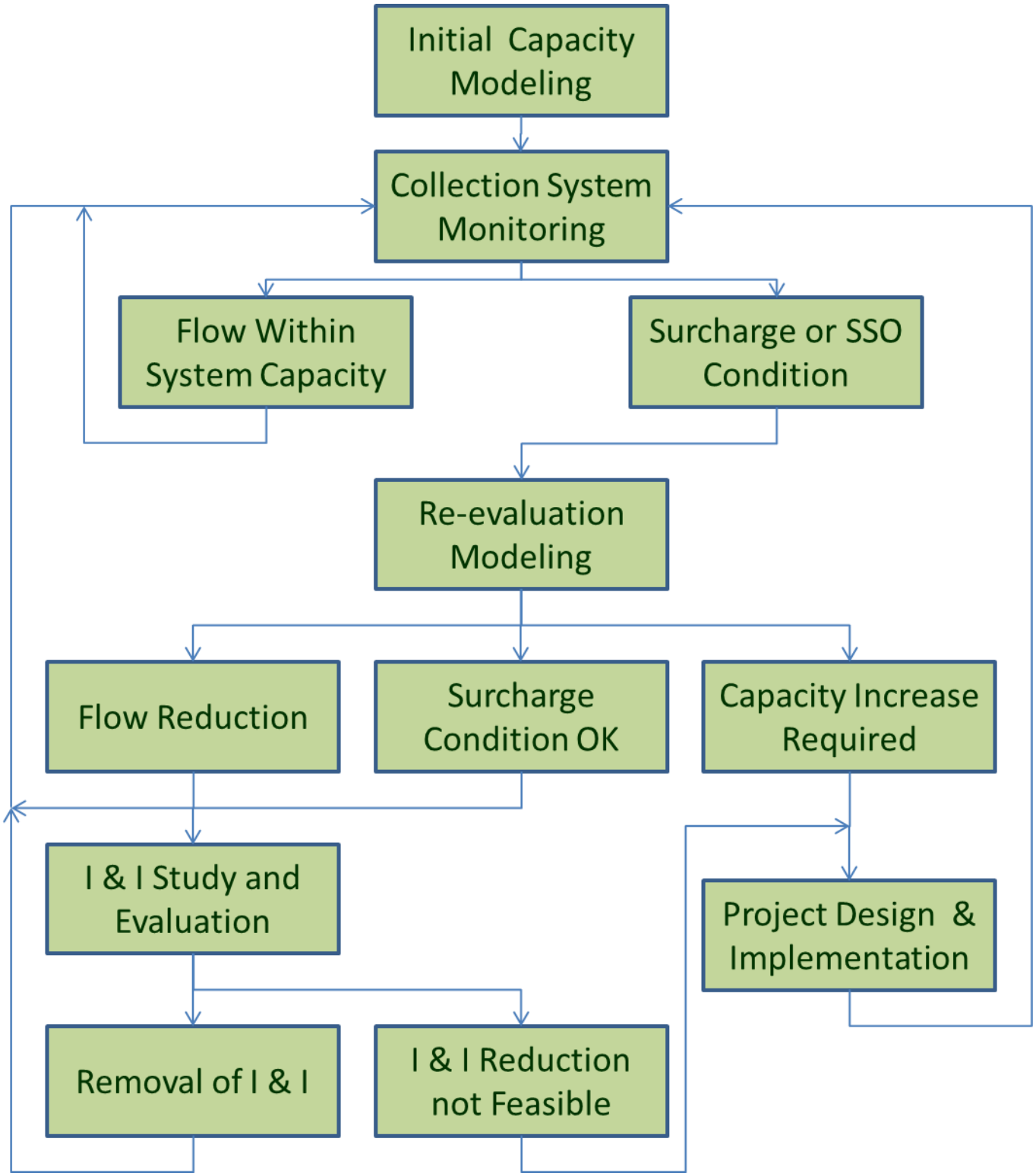
The Kearns Improvement District believes that one of the keys to preventing sanitary sewer overflows is to evaluate system capacity and to monitor flows throughout the system in order to ensure that capacities are not exceeded. Should a collection sub-system exceed the capacity of the pipes, the system will be immediately re-evaluated, and corrective action taken. The following elements are all part of the Kearns Improvement District SECAP program.

1. Initial Capacity Modeling and Master Planning
2. Flow Monitoring
3. Surcharge Flow Analysis
4. Re-evaluation Modeling and Analysis
5. Flow Reduction Evaluation and Implementation
6. Capacity Increase Evaluation and Implementation

The actual implementation process associated with each of the elements above, is shown in the SECAP Flow Chart on the next page. This flow chart process forms the backbone of the SECAP.

Initial Capacity Evaluation

The Kearns Improvement District has performed an analysis and modeling of each critical subsystem contained within its collection system. Subsystems are segregated based on the branching of the collection system. Trunk lines and collector lines are evaluated until the system reaches a point where less than 400 residential dwelling unit equivalents (RE) are upstream of that point in the system. The 400 RE point was chosen based on the minimum slope requirements of the State of Utah. An 8-inch pipe constructed on minimum slope will carry the flow from 400 RE based on 3.2 persons per dwelling unit, 75 gpcd and a peaking factor of 4. The RE equivalent is based on typical Utah information and assumes the peaking factor will account for a reasonable amount of inflow and infiltration. If an area is known to have, or flow metering identifies, a significant amount of inflow and infiltration, additional evaluation will be needed. In these areas the capacity of an 8-inch pipe system may be significantly reduced below 400 RE.



SECAP Flow Chart

In addition to developing an equivalent flow for a residential unit, consideration should also be given to time of concentration in the collection system. Based on typical diurnal flow patterns, if the transit time in the branch system is less than 2 hours, time of concentration can be ignored.

Flow Monitoring

The Kearns Improvement District conducts visual inspection of all sewer lines as part of their flushing and video logging activities associated with the maintenance program. Flow metering of the overall influent system is performed prior to entering the Central Valley Water Reclamation Facility.

Surcharge Flow Analysis

If any collection subsystem is identified as having any of the following problems the system will be evaluated to determine future action. These problems are:

1. Sanitary sewer overflow to the environment
2. Sanitary sewer break remaining in the trench
3. Basement backup
4. Observed subsystem surcharging

The flow evaluation may result in multiple conclusions, some of which may require further action. Possible conclusions and their further actions are listed below. This list is not inclusive, nor does it require the specific actions detailed. These are given as possible examples and will be used by the Operations & Maintenance Manager to determine correct future action.

Flow Reduction Evaluation

Should excessive flows be identified during the surcharge analysis, the solution may be to proceed with an inflow and infiltration study with the ultimate goal of reducing flows. These flow reductions may be achieved by reconstruction of specific areas, internal spot repairs, removing illegal storm water or sump pump connections from homes or storm water systems, and system grouting. Tools used in flow reduction may include extensive in-line camera inspection, smoke testing, dye testing, and increased inspection or flow monitoring.

Foreign Objects or Obstructions

There are multiple foreign objects which may be found in sewers. These may include objects knocked into sewers during construction, illegally placed in sewer manholes, roots, grease and soaps, bellies in piping systems, etc. Each of these problems should be found during the backup investigation and a plan developed to ensure the problem does not re-occur. Types of action may include increased cleaning frequency, spot repairs, greater pretreatment activity, lining of pipes, and other corrective actions which resolve the problem.

Allowable Surcharging

Some piping systems may be able to accept surcharges without creating problems. Such systems may be deep, and surcharging occurs below the level of basements or manhole rims, or they may be in areas where there are no connections. In such cases the resolution of the observed surcharge may just be additional monitoring.

Revised System Modeling

Where piping system problems cannot be resolved in a less expensive way, the system may be further modeled to determine upgrade needs. Modeling should include known flow information and future projections. Since the system has been shown to have problems, further modeling should be more conservative in flow projections. Revised modeling should follow the guide lines given next.

Re-evaluation Modeling and Analysis

When a subsystem needs demonstrate unresolvable problems by less costly means, the subsystem should be re-modeled and required action determined. Revised modeling may show that flow reduction may still be viable, or it may show that the system can allow current surcharge conditions. Most likely, however, the modeling will normally form the basis for construction to enlarge the subsystem capacity. Modeling should be done either by

1. Kearns Improvement District staff using commercially available software
2. Kearns Improvement District staff using spreadsheet models
3. Engineering firms using available software or spreadsheets.

It is important to insure the modeling is comprehensive and includes all the potential flow sources. While the current area zoning and land use planning should be used in the model development, care should be taken to discuss possible changes with appropriate officials. Where possible zoning changes appear likely, the model should be re-run with the revised zoning alternatives. Once a resolution has been selected, the resulting project should be placed on the capital improvement plan (CIP).

Capacity Increase Evaluation and Implementation

The capacity evaluation should be expedited based on the impact of the problem on the environment and the possible repeat of the overflow/backup/surcharging. Details on prioritization are given in the next section. Systems requiring additional capacity should be engineered for expansion by qualified staff or engineering consultants. Project design should be based on acceptable engineering standards and should comply with State of Utah regulations found in R317-3. Easements should be obtained, where needed, and the design should include an analysis of other utilities in the vicinity. Design review should be done by the applicable regulatory agency, as appropriate. A design report should be prepared for each project. Where appropriate, the subsystem modeling may be substituted for the design report. Finalized projects should be placed on the CIP.

System Improvement Prioritization

The priority for improvement should follow the following general guidelines:

High Priority Projects

When there is significant potential for sanitary sewer overflows, or frequent basement backups, the improvement should be considered a high priority and any available budget should be allocated to the project.

Medium Priority Projects

Where the problem is infrequent, and the possibility exists that it may not repeat in the near future, the priority for correction is medium. Medium priority projects may be delayed until appropriate budget is available, or the priority is adjusted to high priority. Should an SSO or basement backup repeat in the same area, the priority should be immediately revised.

Low Priority Projects

If the observed problem is infrequent, there is possibility that it may not repeat in the near future and the possibility that increased flow in the subsystem is low, the correct priority is low. Low priority projects will be placed in the budget process and evaluated against other needs. These projects will eventually be completed, but the work is not prioritized above system and equipment needs.

Capital Improvement Plan

The CIP is part of the Kearns Improvement District's budgeting process to ensure sufficient revenue to address identified weaknesses in the sanitary sewer system. Items which have been identified as needing a structural fix are placed on the CIP list and the cost for each estimated. Sources of funding are identified for all high priority projects so that SSO's or other failures do not re-occur. Forecasts of available funding for medium and low priority projects are made to facilitate future revenue needs.

Kearns Improvement District
Sanitary Sewer System Mapping

The Kearns Improvement District Mapping system is maintained and updated by a computer based GIS system.

Kearns Improvement District
Basement Backup Program

Basement backups are a serious impact on a home or business owner. As such, all reasonable efforts should be taken to prevent such backups from occurring. Sewer system backups are the result of several system problems. Such problems include any one or a combination of the following:

1. Laterals serving real properties are owned by the property owner and lateral maintenance is their responsibility. Roots, low points, structural failure, and grease are primary problems lateral owners face.
2. Backups caused by main line plugs are usually caused by roots, grease, low points, foreign objects and contractor negligence.
3. Piping system structural damage may cause basement backups. Such structural problems include age or deterioration damage, installation damage, excavation damage and trenchless technology damage.
4. Excess flow problems may surcharge a piping system and cause backups into homes. Excess flows usually occur when major storm waters inflow into sanitary sewers. Sanitary sewers are not designed for such flow. In addition, some homeowners may illegally connect foundation drains and sump pumps to the sanitary sewer system.

Basement Backup Response

When the Kearns Improvement District is notified about a basement backup, staff will log the complaint in a complaint log. The person receiving the call may log the backup complaint or may ask administrative staff to document the complaint.

All backup complaints shall be investigated by staff. If the investigation determines that the cause of the backup is only in the lateral, staff may offer technical information but should not take responsibility for cleanup or subsequent restoration.

When it is determined that the basement backup is the result of a mainline problem, Kearns Improvement District will follow the policy approved by its governing authority. A copy of this policy should be given to the home owner. It should be noted that all action the Kearns Improvement District takes is on a no-fault basis. Kearns Improvement District does not accept liability, nor does it waive its governmental immunity.

Backup Prevention Design Standard

The Kearns Improvement District promotes system designs which minimize backups and insure proper operations. To this end, the Kearns Improvement District has a design standard for all system construction. In addition, the Kearns Improvement District complies with state design standards contained in R317-3. Finally, for laterals, the following policy applies:

Policy on the Installation of Backflow Valves

Reference Regulatory Documents

The following regulations are referenced in the establishment of this policy: Utah Code Title 15A-2-103(c). This code section adopts the latest edition of the International Plumbing Code, and the Sewage Backflow section.

Kearns Improvement District Policy

- The State of Utah has adopted the International Plumbing Code(IPC) as its plumbing building standard;
- And the IPC requires the installation of a sewage backwater valve "where the overflow rim of the lowest plumbing fixtures are below the next upstream manhole in the public sewer."

  Therefore, for new construction, the Kearns Improvement District requires the installation of backwater valves as stipulated by the IPC already propagated for all new construction.

Kearns Improvement District
No-Fault Sewage Backup Claims Program

The Kearns Improvement District does participate in a no-fault sewage backup claims program.

Sanitary Sewer Management Plan

KEARNS IMPROVEMENT DISTRICT

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Granger-Hunter Improvement District
Culinary Water and Sanitary Sewer

2888 South 3600 West
P.O. Box 701110
West Valley City, Utah 84170
Telephone: (801) 968-3551
Fax: (801) 968-5467
Web: www.ghid.org

Sanitary Sewer Overflow Response Plan

Prepared By:

Granger-Hunter Improvement District
Wastewater Department

Prepared For:

Granger-Hunter Improvement District
Wastewater Department

Granger-Hunter Improvement District
Sanitary Sewer Overflow Response Plan
Revision Log

By	Comments	Date
Brad Paxman	Miscellaneous revisions to incorporate into Sanitary Sewer Management Plan	July 21, 2014

Granger-Hunter Improvement District
Sanitary Sewer Overflow Response Plan

Approved On:_____

Sewer System Owner:

Granger-Hunter Improvement District
2888 South 3600 West
P.O. Box 701110
West Valley City, Utah 84170
Telephone: (801) 968-3551
Fax: (801) 968-5467
Web: www.ghid.org

Contact Persons:

Clint Jensen, CEO, General Manager
801-968-3551

Joel Johnson, Director of Wastewater Systems
801-968-3551

Regulatory Agency To Report Sewer Overflow:

Utah Department of Environmental Quality

Ms. Jennifer Robinson
Utah Sewer Management Plan Coordinator
Utah Division of Water Quality
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I. INTRODUCTION

Whenever sanitary sewage leave the confines of the piping system, immediate action is necessary to prevent environmental, public health or financial damage from occurring. In addition, quick action in normally needed to mitigate damage which may have already occurred. For the purpose of this section, the following are part of the emergency action plan.

1. Basement backups
2. Sanitary sewer overflows
3. Sanitary sewer breaks which remain in the trench
4. Sewer lateral backups

All of the above conditions are likely to cause some damage. Each should be treated as an emergency, and corrective actions taken in accordance with Granger-Hunter Improvement District directions. Items 1 and 2 above should be reported immediately based on whether they constitute a Class 1 or Class 2 SSO.

1. A Class 1 SSO (Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that:

    a. affects more than five private structures;
    b. affects one or more public, commercial or industrial structure(s);
    c. may result in a public health risk to the general public;
    d. has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or
    e. discharges to Waters of the State of Utah.

2. A Class 2 SSO (Non-Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

All Class 1 SSO's should be reported immediately. Class 2 SSO's should be documented and reported in the annual SSMP report and included in the Municipal Wastewater Planning Program submitted to the State. Item 3 may be reported to the local health department if, in the opinion of the responsible staff member there is potential for a public health issue.

An example of where a public health issue may be present is when an excavator breaks both a sewer and a water line in the same trench. In such cases, the local health department representatives should be contacted and the situation explained. If the health representative requests further action on the part of the District, staff should try and comply. If, in the opinion of the responsible staff member, the health department request is unreasonable, The Manager should be immediately notified. Care should always be taken to error on the side of protecting public health over financial considerations. When a basement backup occurs, the staff member responding should follow the Basement Backup Program procedures. Lateral backups, while the responsibility of the property owner, should also be treated as serious problems. Care should be taken to provide advice to the property owner in such cases, but the property owner is ultimately the decision maker about what actions should be taken.

II. GENERAL

The Sewer Overflow Response Plan (SORP) is designed to ensure that every report of a sewage overflow incident is immediately dispatched to the appropriate Granger-Hunter Improvement District Sewer Department personnel for confirmation. Quick response will minimize the effects of the overflow with respect to impacts on public health, beneficial uses and water quality of surface waters and on customer service. The SORP further includes provisions to ensure safety pursuant to the directions provided by the Utah Department of Environmental Quality (UDEQ) and that notification and reporting is made to the Salt Lake Valley Health Department (SLVHD) when applicable. For purposes of this SORP, "confirmed sewage spill" is also sometimes referred to as "sewer overflow," "overflow," or "SSO."

A. Objectives

The primary objective of the SORP is to protect public health and the environment, satisfy regulatory agencies and waste discharge permit conditions which address procedures for managing sewer overflows, and minimize risk of enforcement actions against the Granger-Hunter Improvement District, sewer system owner.

Additional objectives of the SORP are as follows:

- Protect collection system personnel and wastewater treatment plant;
- Protect the collection system, wastewater treatment facilities, and all appurtenances; and
- Protect private and public property beyond the collection and treatment facilities.

B. Organization of Plan

The key elements of the SORP are addressed individually as follows:

Section III - Overflow Response Procedure
Section IV - Public Advisory Procedure
Section V - Regulatory Agency Notification Procedure
Section VI - Maintenance of SORP
Section VII - Appendices

III. OVERFLOW RESPONSE PROCEDURE

The Overflow Response Procedure presents a strategy for the Granger-Hunter Improvement District Sewer Department to mobilize labor, materials, tools and equipment to correct or repair any condition, which may cause or contribute to an unpermitted discharge. The plan considers a wide range of potential system failures that could create an overflow to surface waters, land or buildings.

A. Receipt of Information Regarding an SSO

An overflow may be detected by District employees or by others. The Granger-Hunter Improvement District is responsible to act based on received phone calls or reports on possible sewage overflow from the wastewater disposal system, and to provide immediate response to investigate and/or correct reported sewer overflow.

Generally, telephone calls from the public reporting possible sewer overflows are received at the public offices identified in Appendix D.

1. The telephone operator obtains all relevant information available regarding the overflow including:

    a. Time and date call was received;
    b. Specific location;
    c. Description of problem;
    d. Time possible overflow was noticed by the caller;
    e. Caller's name and phone number;
    f. Observations of the caller; and
    g. Other relevant information that will enable the District Sewer Department, to quickly locate, assess and stop the overflow.

    The telephone operator records initial information in the Sewage Overflow Report (Ref. Appendix A) and notifies District Sewer Department.

2. The District Sewer Department dispatches sewer maintenance personnel to confirm the

overflow. Until verified, the report of a possible spill will not be referred to as a "sewer overflow."

The District Sewer Department completes the Sewage Overflow Report (Appendix A) within 24 hours of the sewer overflow confirmation and provides the information orally to the UDEQ.

B. Dispatch of Sewer Maintenance Personnel to Site of Sewer Overflow

Failure of any element within the wastewater disposal system that threatens to cause or causes a SSO must trigger an immediate response to isolate and correct the problem. Personnel and equipment must be available to respond to any SSO locations. Additional maintenance personnel shall be "on call" in the event extra manpower is needed. Summary of Sewer Overflow Action Plan is included in Appendix C.

1. Dispatching Maintenance Personnel

- When the Granger-Hunter Improvement District receives notification of a potential sewer overflow outlined in Section A, Granger-Hunter Improvement District Sewer Department dispatches maintenance personnel with appropriate resources as required.

2. Maintenance Personnel Instructions

- Dispatch maintenance personnel by telephone or radio. Assign and appropriate personnel, materials, supplies and equipment needed.

- The telephone operator must verify that the entire message has been received and acknowledged by the maintenance personnel who were dispatched. All personnel being dispatched to the site of an SSO proceed immediately to the site of the overflow. Report any delays or conflicts in assignments immediately for resolution.

- In all cases response maintenance personnel report their findings, including possible damage to private and public property, to the District Sewer Department Manager immediately upon making their investigation. If the District Sewer Department Manager has not received findings from the field crew within one (1) hour the District Sewer Department Manager contacts the response maintenance personnel to determine the status of the investigation.

3. Additional Resources

The District Sewer Department Manager receives and conveys to appropriate parties requests for additional personnel, material, supplies, and equipment for maintenance personnel working at the site of a sewer overflow.

4. Preliminary Assessment of Damage to Private and Public Property

The District maintenance personnel shall use discretion in their actions as reasonably as they can. They must be aware that the Granger-Hunter Improvement District could face increased liability for any further damages inflicted to private property during such assistance. The District maintenance personnel shall not enter private property for purposes of assessing damage unless authorized by the District Sewer Department Manager. The District maintenance personnel shall take appropriate still photographs and/or video footage; if possible, of the sewer overflow impacted area in order to thoroughly document the nature and extent of impacts. Retain photographs for filing with the Overflow Report.

5. Field Supervision and Inspection

- The District Sewer Department Manager visits the site of the sewer overflow to ensure that provisions of this Overflow Response Plan and other directives are met.

- The District Sewer Department Manager is responsible for verbally notifying UDEQ and SLVHD within the specified time and submitting the Overflow Report to UDEQ.

6. Coordination with Hazardous Material Response

- Upon arrival at the scene of a sewer overflow, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the District sewer maintenance crew shall immediately contact the District Sewer Department Manager for guidance before taking further action.

- Should the District Sewer Department Manager determine the need to alert the hazardous material response team, the maintenance personnel awaits the contracted hazardous waste team response.

- Contact the UDEQ 24 Hour Emergency Phone Number for Incident Spills at 1-801-536-4123.

- Upon arrival of the hazardous material response team, the District sewer maintenance personnel takes direction from the person with the lead authority of that team. Only when that authority determines it is safe and appropriate for the District sewer maintenance personnel to proceed under the SORP with the containment, clean-up activities and correction.

C. Overflow Correction, Containment, and Clean-Up

This section describes specific actions to be performed by the District sewer maintenance personnel during a SSO.

The objectives of these actions are:

- To protect public health, environment and property from sewage overflows and restore surrounding area back to normal as soon as possible;

- To establish perimeters and control zones with appropriate traffic cones and barricades, vehicles or use of natural topography (e.g., hills, berms);

- To promptly notify the regulatory agency with preliminary overflow information and potential impacts;

- To contain the sewer overflow to the maximum extent possible including preventing the discharge of sewage into surface waters; and

- To minimize the Granger-Hunter Improvement District's exposure to any regulatory agency penalties and fines.

Under most circumstances, the Granger-Hunter Improvement District can handle all response actions with its own maintenance forces. They have the skills and experience to respond rapidly and in the most appropriate manner. An important issue with respect to an emergency response

is to ensure that the temporary actions necessary to divert flows and repair the problem do not produce a problem elsewhere in the system.

Circumstances may arise when the Granger-Hunter Improvement District could benefit from the support of private-sector construction assistance. This may be true in the case of large diameter pipes buried to depths requiring sheet piling and dewatering should excavation be required. The Granger-Hunter Improvement District may also choose to use private contractors for open excavation operations that might exceed one day to complete.

1. Responsibilities of District Sewer Maintenance Personnel Upon Arrival

   It is the responsibility of the first personnel who arrive at the site of a sewer overflow to protect the health and safety of the public by mitigating the impact of the overflow to the maximum extent possible. Should the overflow not be the responsibility of The Granger-Hunter Improvement District but there is imminent danger to public health, public or private property, or to the quality of waters of the state, then the District Sewer Department Manager takes prudent emergency action until the responsible party assumes responsibility and provides actions.

   Upon arrival at a SSO, the District sewer maintenance personnel performs the following:

   - Determines the cause of the overflow, e.g. sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.;
   - Identifies and requests assistance or additional resources to correct the overflow or to assist in determination of its cause;
   - Takes immediate steps to stop the overflow, e.g. relieves pipeline blockage, manually operates pump station controls, repairs pipe, etc. Extraordinary steps may be considered where overflows from private property threaten public health and safety (e.g., an overflow running off of private property into the public right-of-way); and
   - Requests additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the overflow.

2. Initial Measures for Containment

   Initiate measures to contain the overflowing sewage and recover where possible sewage which has already been discharged, minimizing impact to public health or the environment.

   - Determine the immediate destination of the overflow, e.g. storm drain, street curb gutter, body of water, stream bed, etc.;
   - Identify and request the necessary materials and equipment to contain or isolate the overflow, if not readily available; and
   - Take immediate steps to contain the overflow, e.g., block or bag storm drains, recover through vacuum truck, divert into downstream manhole, etc.

3. Additional Measures Under Potentially Prolonged Overflow Conditions

   In the event of a prolonged sewer line blockage or a sewer line collapse, set up a portable by-pass pumping operation around the obstruction.

- Take appropriate measures to determine the proper size and number of pumps required to effectively handle the sewage flow.

- Implement continuous or periodic monitoring of the by-pass pumping operation as required.

- Address regulatory agency issues in conjunction with emergency repairs.

4. Cleanup

Clean sewer overflow sites thoroughly after an overflow. No readily identified residue (e.g., sewage solids, papers, rags, plastics, and rubber products) is to remain.

- Whenever possible digital photos should be taken of the area before and after cleanup.

- Where practical, thoroughly flush the area and clean of any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal.

- Secure the overflow area to prevent contact by members of the public until the site has been thoroughly cleaned.

- Where appropriate, disinfect and deodorize the overflow site.

- Where sewage has resulted in ponding, pump the pond dry and dispose of the residue in accordance with applicable regulations and policies.

- If a ponded area contains sewage, which cannot be pumped dry, it may be treated with bleach. If sewage has discharged into a body of water that may contain fish or other aquatic life, do not use bleach. Contact the UDEQ for specific instructions.

D. Sewage Overflow Report

The Sewer Overflow Report in Appendix A contains information which is required to be reported to UDEQ and possibly to SLVHD depending upon the nature of the spill.

If the overflow will affect bathing areas during the bathing season, or public drinking water intakes, the District shall notify the UDEQ contact person and the SLVHD contact person orally.

The District Sewer Department Manager completes a Sewer Overflow Report (Appendix A). The District Sewer Department Manager promptly notifies the District Office and UDEQ when the overflow is eliminated. Information regarding the sewer overflow includes the following:

- Determination if the sewage overflow had reached surface waters, i.e., all overflows where sewage was observed running to surface waters, or there was obvious indication (e.g. sewage residue) that sewage flowed to surface waters; and

- Determination that the sewage overflow had not reached surface waters by describing conditions at the sewage overflow, which support this determination.

- Determination of the start time of the sewer overflow by one of the following methods:

  a. Date and time information received and/or reported to have begun and later substantiated by District sewer maintenance personnel;

b. Visual observation;

- Determination of the stop time of the sewer overflow by one of the following methods:

  a. When the blockage is cleared or flow is controlled or contained; or

  b. The arrival time of the District sewer maintenance personnel, if the overflow stopped between the time it was reported and the time of arrival.

- Visual observations

  An estimation of the rate of sewer overflow in gallons per minute (GPM) by one of the following criteria:

  a. Direct observations of the overflow; or

  b. Measurement of actual overflow rate from the sewer main.

- Determination of the volume of the sewer overflow

- Photographs of the event, when possible.

- Assessment of any damage to the exterior areas of public/private property. District sewer maintenance personnel shall not enter private property for purposes of estimating damage to structures, floor and wall coverings, and other personal property without authorization from the District Sewer Department Manager.

E. Customer Satisfaction

The District Sewer Department Manager follows up in person or by telephone with the entity who was reporting the overflow. The cause of the overflow and its resolution will be disclosed.

IV. PUBLIC ADVISORY PROCEDURE

This section describes the actions the Granger-Hunter Improvement District will take, in cooperation with the UDEQ and/or SLVHD, to limit public access to areas potentially impacted by unpermitted discharges of pollutants to surface water bodies from the wastewater collection system.

A. Temporary Signage

The Granger-Hunter Improvement District has primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from uncontrolled wastewater discharges from its facilities. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination.

The District Sewer Department Manager and General Manager (following consultation with the UDEQ) determine if posting of a confirmed overflow is necessary.

B. Other Public Notification

Should the posting of surface water bodies or ground surfaces subjected to a sewer overflow be deemed necessary by the District Sewer Department, the District Sewer Department Manager and General Manager (following consultation with the UDEQ) determines the need for further public notification.

V. REGULATORY AGENCY NOTIFICATION PLAN

The Regulatory Agency Notification Plan establishes procedures, which the Granger-Hunter Improvement District follows to provide formal notice to the UDEQ as necessary in the event of a SSO.

Agency notifications will be performed in parallel with other internal notifications. Internal notification and mobilization of District sewer maintenance personnel are established in Section III - Overflow Response Procedure.

Using data supplied during the verification process and updates from the maintenance personnel, the District Sewer Department Manager prepares initial and final Overflow Reports. Initial report will be provided orally to the UDEQ and if necessary the local health department within 24 hours from the time the District became aware of the SSO. If the overflow will affect bathing areas during the bathing season, or public drinking water intakes, the District shall notify the UDEQ contact person and the SLVHD contact person orally, within two hours of becoming aware of the discharge

Prepare and provide final report to the regulatory agency within five (5) days after the District becomes aware of the overflow. Submit by mail. The District Sewer Department Manager is responsible for meeting the notification requirement. The District Sewer Department Manager prepares written notification to the appropriate regulatory agency of any confirmed overflows. The District Sewer Department Manager signs these notifications. The UDEQ contact person may waive the written report requirement on a case-by-case basis if the oral report was received within the required time frame. Regardless of other notifications, a Report of Noncompliance form is required to be submitted with the monthly Discharge Monitoring Report.

A. Immediate Notification

If the overflow will affect bathing areas during the bathing season, or public drinking water intakes, the District shall notify the UDEQ contact person and the SLVHD contact person orally, within two hours of becoming aware of the discharge.

Transmit the initial and any updated Sewer Overflow Report to:

- Ms. Jennifer Robinson
  Utah Sewer Management Plan Coordinator
  Utah Division of Water Quality
  195 North 1950 West
  Salt Lake City, Utah 84116
  Telephone: 801-536-4383
  Fax: 801-536-4301
  E-mail: jenrobinson@utah.gov
  Website: www.waterquality.utah.gov

B. Secondary Notification

District Sewer Department Manager may contact other agencies, as necessary, as well as other interested and possibly impacted parties.

VI. MAINTENANCE OF SORP

The SORP will be reviewed on an annual basis. Possible amendments can include:

- Change in procedures
- Change in contact personnel
- Changes due to regulatory requirements

APPENDICES

Appendix A - Sanitary Sewer Overflow Report Form

Appendix B - Sewer Overflow Notice Plan Flow Chart

Appendix C - Sewer Overflow Response Tracking Protocol

Appendix D - List of Public Offices to Report Overflow

Appendix E - Suggested Criteria for Demonstrating How a Sewer Overflow was Unavoidable

Appendix F - Measures to Avoid Sewer Overflow

Appendix G - Overflow Descriptions and Required Notifications

Appendix A
SANITARY SEWER OVERFLOW REPORT FORM

1. General Information

a. Sanitary System ID No. 61

b. Name of collection system: _____

c. Authorized representative filing this form:

Name: _____

Title: _____

E-mail Address: _____

d. Type of filing report:

□ Initial

□ Final

e. Date of filing report:

□ Initial _____

□ Final _____

2. Oral Reporting of Overflow, Bypass or Upset

All releases of untreated or partially treated sewage require 24-hour oral notification except those that require 2-hour oral notification.

a. Overflow requiring 2-hour notification.

□ Impact or closure of bathing area

□ Impact or closure of public drinking water intake

□ Results in fish kills

□ Other: _____

b. Overflow requiring 24-hour notification.

□ Gravity sewer manhole

□ Pump station

□ Treatment plant bypass

□ Other

c. Oral report to UDEQ contact person.

Name: _____

Phone Number: _____

E-mail Address: _____

UDEQ Office: _____

Date of phone notification: _____

d. Oral report to local Health Department contact person.

Name: _____

Phone Number: _____

E-mail Address: _____

UDEQ Office: _____

Date of phone notification: _____

3. Overflow Location and Description

a. Location

City: _____

Address: _____

b. Discharge Location:

- □ Directly to receiving ground water
- □ Ground
- □ Receiving water via storm drain
- □ Building

c. Type of overflow

- □ Gravity sewer manhole
- □ Pump station
- □ Bypass at treatment plant
- □ Other _____

4. Time of Overflow/Bypass Incident

When did the incident begin? Date: _____

Was the overflow/bypass event ongoing at the time of report: □ Yes □ No

If yes, how long is the incident expected to continue? _____

If no, when did event end? Date: _____ Time: _____

5. General Information about Overflow at this Location

a. Estimated volume of overflow released at time of report: _____

b. Method of estimating volume: _____

c. Estimated total volume of overflow released at end of incident: _____

d. Were digital photos taken: □ Yes □ No

e. Corrective measures taken:

- □ No action
- □ Removed blockage
- □ Repair pump station
- □ Other: _____

f. Cause of overflow/bypass (select all those that apply):

- □ Rain
- □ Snow melt
- □ High ground water
- □ Other excessive flow
- □ Sewer system blockage or collapse
- □ Pump /lift station failure
- □ Other: _____

g. Additional comment: _____

FIVE DAY WRITTEN INCIDENT REPORT

Complete the first five sections of this notification form and use the space below to include any additional information regarding the overflow. Include any steps taken or planned to prevent a recurrence. Submit this form to the regional UDEQ office within five days of becoming aware of the incident.

_____

_____

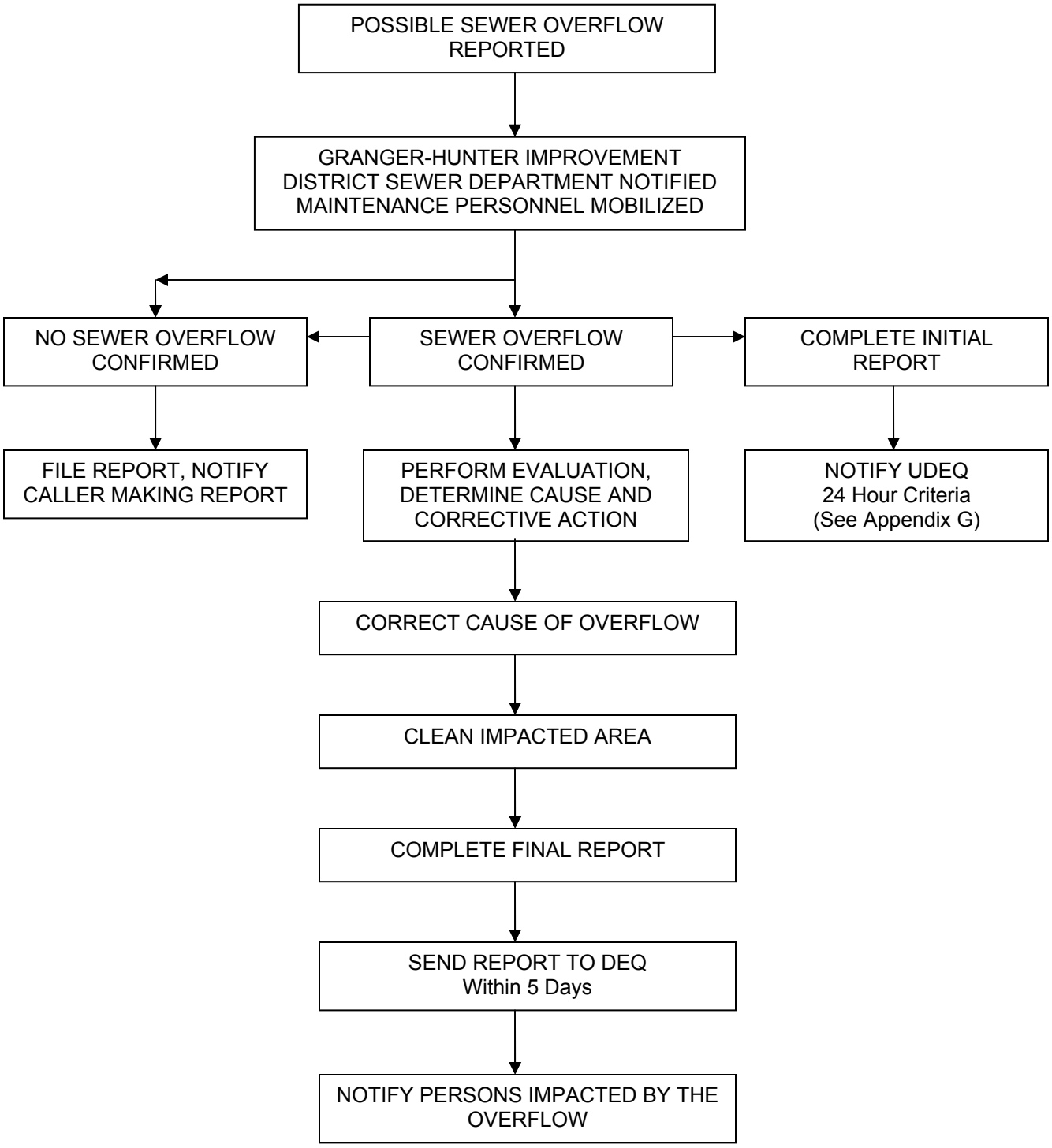
_____

_____

_____

_____

Appendix B
SEWER OVERFLOW NOTICE PLAN FLOW CHART - GRANGER-HUNTER IMPROVEMENT DISTRICT WASTEWATER DISPOSAL SYSTEM



Appendix C
SEWER OVERFLOW (SSO) RESPONSE TRACKING PROTOCOL GRANGER-HUNTER IMPROVEMENT DISTRICT WASTEWATER DISPOSAL SYSTEM

Step	Event
1.	Report of possible SSO received by a telephone operator.
2.	Telephone Operator enters received information into Sewer Overflow Report.
3.	Telephone Operator contacts District Sewer Department, which then deploys maintenance personnel to confirm reported SSO.
4.	Maintenance personnel reports back to the District Sewer Department Manager reporting significance of the overflow.
5.	District Sewer Department Manager completes initial Overflow Report. If the overflow will affect bathing areas during the bathing season, or public drinking water intakes, the District shall notify the UDEQ contact person and the SLVHD contact person orally, within 24 hours of becoming aware of the discharge.
6.	Within 5 days the Granger-Hunter Improvement District Sewer Department Manager prepares final Overflow Report. Report is mailed to UDEQ.
7.	Data from Overflow Report are entered into a permanent record on file at the District Sewer Department.
8.	Attach Report of Noncompliance to Discharge Monitoring Report.

Appendix D
LIST OF PUBLIC OFFICES TO REPORT OVERFLOW - GRANGER-HUNTER IMPROVEMENT DISTRICT WASTEWATER DISPOSAL SYSTEM

Contact Name	Telephone
Granger-Hunter Improvement District Office	801-968-3551
Granger-Hunter Improvement District Sewer Department	801-968-3551
Utah Department of Environmental Quality	801-536-4100
Salt Lake Valley Health Department	801-313-6696
West Valley City Public Works Department	801-963-3448

Appendix E
SUGGESTED CRITERIA FOR DEMONSTRATING HOW A SEWER OVERFLOW WAS UNAVOIDABLE - GRANGER-HUNTER IMPROVEMENT DISTRICT WASTEWATER DISPOSAL SYSTEM

SSO's can be demonstrated as unavoidable by showing the discharge meets each of the criteria 1 through 5.

1. The discharge resulted from a temporary, exceptional incident that was either:

   A. Necessary to prevent loss of life, personal injury, or severe property damage

   B. Beyond the reasonable control of the operator. Incidents beyond the reasonable control of the operator would include:

      - Exceptional acts of nature;
      - Third party actions that could not be reasonably prevented, including vandalism that could not be avoided by reasonable measures;
      - Blockages that could not be avoided by reasonable measures;
      - Unforeseeable sudden structural, mechanical, or electrical failure that could not be avoided by reasonable measures.

2. The discharge had no feasible alternative.

3. The discharge was not caused by any of the following;

   A. Operational error,

   B. Improperly designed or constructed collection system facilities,

   C. Inadequate collection system facilities or components,

   D. The lack of appropriate preventive maintenance, or

   E. Careless or improper oversight

4. Steps to stop the discharge, address the source of the problem, and mitigate potential impacts from the discharge were taken as soon as possible after becoming aware of the release.

Appendix F
MEASURES TO AVOID SEWER OVERFLOW GRANGER-HUNTER IMPROVEMENT DISTRICT WASTEWATER DISPOSAL SYSTEM

A. Proper Collection System Maintenance and Operations Program

- Cleaning of pipes (grease, roots deposits)
- Sealing or maintenance for deteriorating sewers
- Remediation of poor/substandard construction (short term)
- Sewer replacement or rehabilitation program (long term)
- Proper maintenance and operations of pump stations
- Inspection of private laterals

B. New Wastewater Disposal System Construction

- Use latest technology and standards in constructing new wastewater disposal system improvements
- Perform proper construction inspection/quality assurance procedures

Appendix G
OVERFLOW DESCRIPTIONS AND REQUIRED NOTIFICATION

Overflows Requiring 24-Hour Notification

- A Class 1 SSO (Significant SSO)
- A Class 2 SSO (Non-Significant SSO)

Regulatory Agency To Report Sewer Overflow:

Utah Department of Environmental Quality

Ms. Jennifer Robinson
Utah Sewer Management Plan Coordinator
Utah Division of Water Quality
195 North 1950 West
Salt Lake City, Utah 84116
Telephone: 801-536-4383
Fax: 801-536-4301
E-mail: jenrobinson@utah.gov
Website: www.waterquality.utah.gov

Salt Lake County Health Department

Salt Lake Valley Health Department
788 East Woodoak Lane (5380 South)
Murray, Utah 84107
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24-Hour No.: 801-580-6681
Website: www.slvhealth.org

SANITARY SEWER MANAGEMENT PLAN (SSMP) FOR

MAGNA WATER DISTRICT

Prepared by

As of September 2016

SANITARY SEWER MANAGEMENT PLAN (SSMP) FOR MAGNA WATER DISTRICT

Prepared by

September 2016

Magna Water District

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Version Date November 23, 2016

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Chapter 1 - Sanitary Sewer Management Plan

Introduction

Magna Water District is a public entity established in Utah under the Utah State Code. The District was established in 1949 and provides sewage collection and/or treatment to the Magna Township and small portions of West Valley City and Northwest Salt Lake City. This Sewer System Management Plan (SSMP) manual has been established to provide a plan and schedule to properly manage, operate, and maintain all parts of the sewer collection system to reduce and prevent SSOs, as well as minimize impacts of any SSOs that occur. The Management for this entity recognizes the responsibility it has to operate the sewer system in an environmentally and fiscally responsible manner. As such, this manual will cover aspects of the collection system program necessary to provide such an operation. This manual may refer to other programs or ordinances and by reference may incorporate these programs into this manual.

Definitions

The following definitions are to be used in conjunction with those found in Utah Administrative Code R317. The following terms have the meaning as set forth:

1) "BMP" means "best management practice".
2) "CCTV" means "closed circuit television.
3) "CIP" means a "Capital Improvement Plan".
4) "DWQ" means "the Utah Division of Water Quality".
5) "FOG" means "fats, oils and grease". This is also referred to as a Grease Oil and Sand Program(GOSI).
6) "I/I" means "infiltration and inflow".
7) "Permittee" means a federal or state agency, municipality, county, district, and other political subdivision [public entity] of the state that owns or operates a sewer collection system or who is in direct responsible charge for operation and maintenance of the sewer collection system. When two separate federal or state agency, municipality, county, district, and other political subdivision of the state are interconnected, each shall be considered a separate Permittee.
8) "SECAP" means "System Evaluation and Capacity Assurance Plan".
9) "Sewer Collection System" means a system for the collection and conveyance of wastewaters or sewage from domestic, industrial and commercial sources. The Sewer Collection System does not include sewer laterals under the ownership and control of an owner of real property, private sewer systems owned and operated by an owner of real property, and systems that collect and convey stormwater exclusively.

10) “SORP” means “Sewer Overflow Response Plan”
11) "SSMP" means "Sewer System Management Plan".
12) "SSO" means "sanitary sewer overflow", the escape of wastewater or pollutants from, or beyond the intended or designed containment of a sewer collection system.
13) "Class 1 SSO" (Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that:
    a) affects more than five private structures;
    b) affects one or more public, commercial or industrial structure(s);
    c) may result in a public health risk to the general public;
    d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or
    e) discharges to Waters of the State of Utah.
14) "Class 2 SSO" (Non Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.
15) "USMP" means the "Utah Sewer Management Program".

General SSO Requirements

The following general requirements for SSO’s are stipulated in R317-801 and are included here as general information.

1) *The permittee shall take all feasible steps to eliminate SSOs to include:*
    a) *Properly managing, operating, and maintaining all parts of the sewer collection system;*
    b) *training system operators;*
    c) *allocating adequate resources for the operation, maintenance, and repair of its sewer collection system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures in accordance with generally acceptable accounting practices; and,*
    d) *providing adequate capacity to convey base flows and peak flows, including flows related to normal wet weather events. Capacity shall meet or exceed the design criteria of R317-3.*
2) *SSOs shall be reported in accordance with the requirements below.*
3) *When an SSO occurs, the permittee shall take all feasible steps to:*
    a) *control, contain, or limit the volume of untreated or partially treated wastewater discharged;*
    b) *terminate the discharge;*
    c) *recover as much of the wastewater discharged as possible for proper disposal, including any wash down water; and,*
    d) *mitigate the impacts of the SSO.*

SSO Reporting Requirements

R317-801 stipulates when and how SSO's are reported. Following are those reporting requirements as of 04/23/2012.

SSO REPORTING. SSOs shall be reported as follows:

1) *A Class 1 SSO shall be reported orally within 24 hrs and with a written report submitted to the DWQ within five calendar days. Class 1 SSO's shall be included in the annual USMP report.*
2) *Class 2 SSOs shall be reported on an annual basis in the USMP annual report.*

ANNUAL REPORT. A permittee shall submit to DWQ a USMP annual operating report covering information for the previous calendar year by April 15 of the following year.

Sewer Use Ordinance

Magna Water District has a sewer use ordinance that has been adopted by the governing body. This ordinance contains the following items as stipulated by Utah State Code R317-801:

1. Prohibition on unauthorized discharges,
2. Requirement that sewers be constructed and maintained in accordance with R317-3,
3. Ensures access or easements for maintenance, inspections and repairs,
4. Has the ability to limit debris which obstruct or inhibit the flow in sewers such as foreign objects or grease and oil,
5. Allows for the inspection of industrial users, and
6. Provides for enforcement of ordinance or rules violations.

The following elements are included in this SSMP:

- General Information
- Operations and Maintenance Program
- Sewer Design Standards
- Sanitary Sewer Overflow Response Plan
- Grease, Oil and Sand Interceptor Management Program
- System Evaluation and Capacity Assurance Plan
- SSMP Monitoring and Measurement Plan
- Sewer System Mapping Program
- Basement Backup Program
- No Fault Sewage Backup Claims Program

This program is intended to be a guidance document and is not intended to be part of a regulatory requirement. As such, failure to strictly comply with documentation requirements is, in and of themselves, not a failure of the program's effectiveness. Documentation failures are intended to be identified during system self-audits and will be addressed as training opportunities. Significant system failures will be followed up with corrective action plans. This corrective action process will be implemented by all individuals involved in the SSMP program. Not all District employees will necessarily be involved in the collection system operations. As such, not all employees will receive program training. Finally, although not a part of this SSMP program, the District is an active participant in the Blue Stakes of Utah Utility Notification system. This system, regulated under title 54-8A of the Utah State Code, stipulates utility notification of all underground operators when excavation takes place. The intent of this regulation is to minimize damage to underground facilities. The District has a responsibility to mark their underground sewer facilities when notified an excavation is going to take place. Participation in the Blue Stakes program further enhances the protection of the collection system and reduces SSO's.

Chapter 2 - SSMP – General Information

This Sanitary Sewer Management Plan was adopted by governing board on _____.

The responsible representative(s), position and phone number for the District with regard to this SSMP is/are:

Name	Position	Phone Number
Terry Pollock	District Manager	(801) 250-2118
Clint Dilley	District Engineer	(801) 250-2118
Steve Williams	Wastewater Operations Manager	(801) 250-2118
Raymond Mondragon	Collection System Lead & Pretreatment Coordinator	(801) 250-2118
Leisle Fitzgerald	Controller	(801) 250-2118

Description of Roles and Responsibilities

The following positions have the described responsibility for implementation and management of the specific measures as described in the SSMP.

Manager

The Manager is responsible for overall management of the sanitary sewer collection system. Responsibilities include working with governance to assure sufficient budget is allocated to implement the SSMP, maintenance of the SSMP documentation, development of a capital improvement program and general supervision of all staff.

Engineer

The Engineer is responsible for the development and maintenance of collection system design standards, maintenance of collection system mapping and maintenance of the SECAP program.

Wastewater Operations Manager (Superintendent)

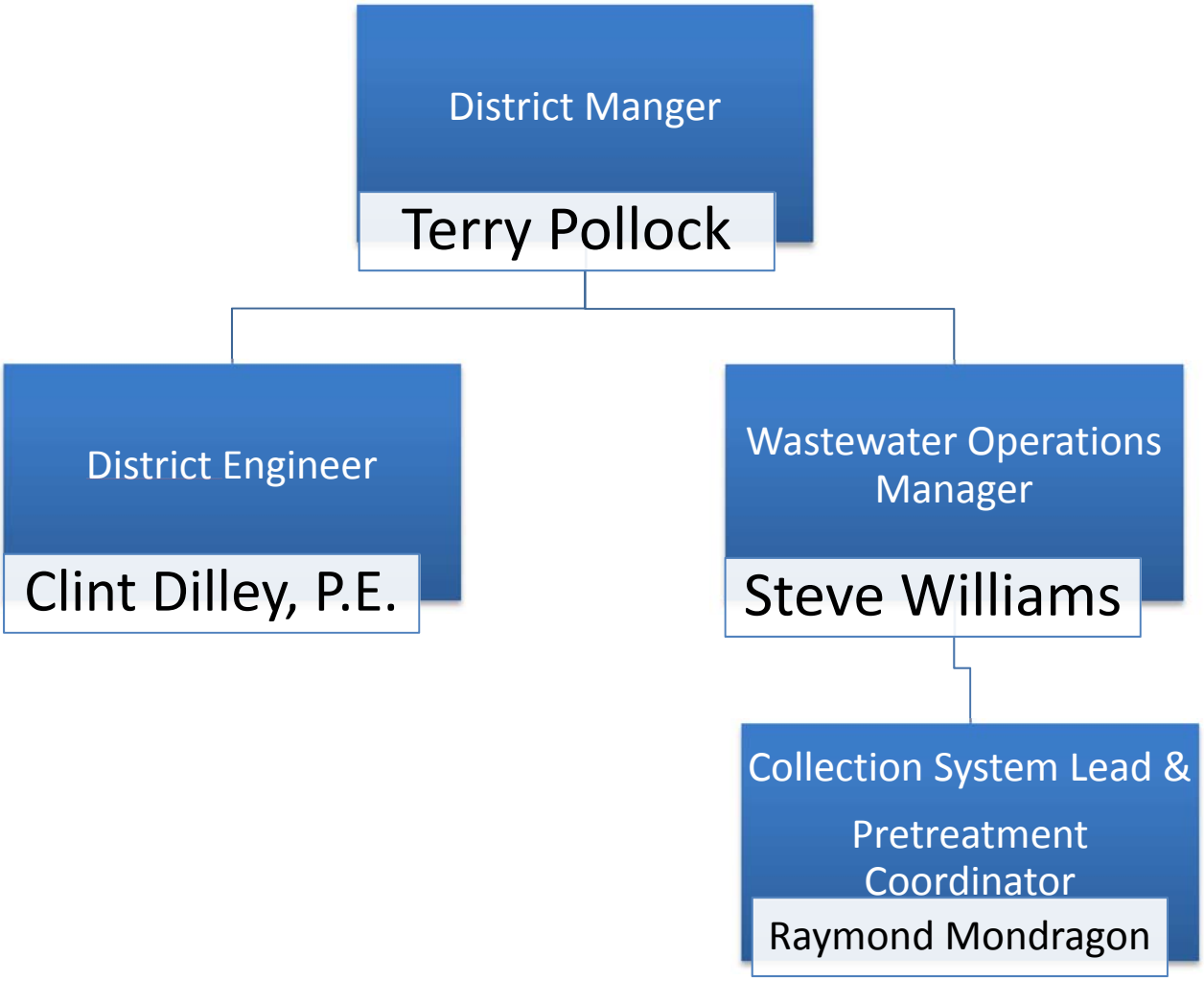
The Wastewater Operations Manager is responsible for daily implementation of the SSMP. This includes maintenance activities, compliance with SORP requirements, and monitoring and measurement reporting requirements.

Pretreatment Program Coordinator

This individual is responsible for implementation of the pretreatment program including the fats oil and grease program.

Organization Chart

Below is the organization chart associated with the SSMP:



Chapter 3 - Operations and Maintenance Program

Magna Water District has established this sanitary sewer system operations and maintenance program to ensure proper system operations, to minimize any basement backups or SSOs, and to provide for replacement, refurbishment, or repair of damaged or deteriorated piping systems. The combined maintenance program should insure that the environment and health of the public are protected at a reasonable cost for the end users. To this end, the following areas are described and included in this maintenance program:

- System Mapping
- System Cleaning
- System CCTV Inspection
- Manhole Inspection
- Defect Reporting
- Damage Assessment

System Mapping

An up to date map is essential for effective system operations. The District has assigned the mapping responsibility to the engineer who will prepare and maintain current mapping for the entire sanitary sewer system. Mapping may be maintained on either paper or in a graphical information system (GIS) or a combination of both. Current mapping is available at the following locations:

Magna Water District

2711 South 8600 West

Magna, Utah 84044

Should any employee identify an error in the mapping, they should document the error on a defect report and give it to the engineer.

System Cleaning

Sanitary sewer system cleaning is accomplished through various means and methods. The District has established a goal to clean the entire system every three years. Based on experience over the past 20 years, this frequency significantly reduces the number of basement backups, controls grease problems and flushes any bellies in the system. In addition The District has a listing of identified hot spots which are maintained at a higher frequency. Systems which may have roots are mechanically rodded or hydraulically cut out and areas where restaurants are close together are hydraulically flushed with a high pressure jet truck. The following methods are employed to provide system cleaning:

Magna Water District: Hydraulic Cleaning

Chemical Root Control

Chemical FOG Control

Cleaning records are maintained at Magna Water District WWTP Administration Building: 7764 West 2100 South, Magna Utah, 84044. Contractors are required to provide cleaning records associated with their work. Cleaning history may also be entered into the GIS; however, this is not always necessary. Should the cleaning process identify a serious defect, the problem should be reported on a Defect Report Form. The Wastewater Operations Manager should be given the defect reports for further action. The defect report should be specific as to location and type of problem. A copy of the Defect Report Form is included at the end of this narrative section. A summary of cleaning activities shall be prepared annually by the Wastewater Operations Manager or designee. This summary will normally be presented to Magna Water District Board of Trustees.

System CCTV Inspection

Closed Circuit TV inspections of the sanitary sewer system are used to assess pipe condition and identify problems or possible future failures which need current attention. The CCTV process also identifies the piping condition to allow for replacement prior to failure. Generally the District will conduct CCTV inspection with [its own staff, contractor or both]. Inspections of the system will occur every 10 years. This inspection frequency is based on the pipe aging process. As such, once the system has been inspected completely, change usually occurs gradually. CCTV will also be employed when a systems operation or capacity is questioned or when an SSO occurs. Any defects identified during the CCTV process should be reported on a Defect Report Form and the form should be given to the Wastewater Operations Manager for possible repairs. Documentation of CCTV activities will be maintained at Magna Water District WWTP Administration Building: 7764 West 2100 South Magna Utah, 84044. When contractors

are employed to inspect the sanitary sewer system they will be required to submit records for their work. The Wastewater Operations Manager will prepare an annual summary of CCTV inspections completed for that calendar year.

Manhole Inspection

The District schedules annual inspection of the sanitary sewer manholes (M/H). The M/H inspection involves the identification of foreign objects and surcharging that may be present. Crews inspecting the manholes will be given maps by the District Engineer who will monitor the progress and completeness of the inspection process. When a potential defect is identified the manhole should be flagged. Flagged manholes should be checked by an operator within several days to determine further action. If, during the inspection process, the inspection crew believes a problem is imminent, they should immediately cease inspecting and inform the Wastewater Operations Manager of the problem. A cleaning crew should be dispatched immediately to ensure correct system operations. All inspection records should be retained for documentation of work performed.

Defect Reporting

Defect Reports generated through the cleaning, CCTV inspection, pump station inspection or manhole inspection programs will be prioritized for correction by the Wastewater Operations Manager and General Manager. Any defects which have the potential for catastrophic failure and thus create a sanitary sewer overflow should be evaluated immediately and discussed with the General Manager and the Wastewater Operations Manager for repair. Repair methods may include:

Spot Excavation Repairs

Spot Band Repairs

Segment Excavation Replacements

Segment Lining

Manhole Rehabilitation

When a defect is not flagged for immediate repair, it should be considered for placement on the “hot spot” list. This will allow for vigilant maintenance to ensure failure and a subsequent sanitary sewer overflow do not take place. Defect reports should be used in the Budget process to determine what financial allocation should be made in the next Budget year. The Wastewater Operations Manager should include outstanding defects in the annual report.

Collection System Damage

Collection damage may occur as a result of multiple factors, some identified as a result of inspection activities and some identified as a result of damage by third parties such as contractors.

Damage Identification

The identification of system damage which may result in an SSO or basement backup is important to prevent environmental, public health, or economic harm. Identification of damage may be from either internal activities or external activities.

Internal activities which may result in the identification of damage include the following:

1. Collections Maintenance Activities
2. CCTV Inspection Activities
3. Manhole Inspection Activities

These three activities are discussed in this Maintenance Program and the identification of damage will result in the generation of a Defect Report. Generally, damage identification is an iterative and continuous process.

External activities which identify damages include:

1. Contractor Notification of Damage
2. Directional Drilling Notification of Damage
3. Public Damage Complaints

All three of these notifications generally require immediate response. Staff should respond and evaluate the seriousness of the damage and the effect on the environment. Damages which include a release to the environment should be handled in accordance with the SORP. Damages which cause a basement backup should trigger the Basement Backup program. Damages which remain in the trench should be de minimis and do not require more action than the repair of the damage.

Whatever the cause of collection system damage, the response should be expeditious to prevent environmental or economic harm. District staff should

consider all damages an emergency until it is shown by inspection to be a lower priority.

Damage Response Actions

When damages occur in the collection system, the following actions help define the path staff should take. These action plans are not inclusive of all options available but are indicative of the types of response that may be taken.

Stable Damage

Inspection activities may show a system damage which has been there for an extended period of time. Such damage may not require immediate action but may be postponed for a period of time. When stable damage is identified and not acted upon immediately, a defect report should be prepared. If such a defect is identified and repaired immediately, a defect report is not needed. An example of stable damage could be a major crack in a pipeline or a severely misaligned lateral connection where infiltration is occurring.

Unstable Damage

Unstable damage is damage which has a high likely hood that failure will occur in the near future. Such damage may be a broken pipe with exposed soil or a line which has complete crown corrosion. In these cases, action should be taken as soon as there is a time, a contractor, materials and other necessary resources available. When such unstable damage is identified, if possible, consideration should be given to trenchless repairs which may be able to be completed quicker than standard excavation. Immediately after identification the Manager should be contacted to review and take care of budget considerations.

Immediate Damage

When a contractor or others damage a collection line such that the line is no longer capable of functioning as a sewer, this immediate damage must be handled expeditiously. Such damage allows untreated wastewater to pool in the excavation site, spill into the environment or possibly backup into a basement. Under such conditions priority should be given to an immediate repair. Since excavation damage may be a result of contractor negligence or it could be a failure of the District to adequately protect the line by appropriately following the Damages to Underground Utilities

Statute 54-8A, priority should be given to effecting a repair and not to determining the eventual responsible party.

As can be determined from the above action plans, priority should always be preventing SSO's and attendant environmental damage, to prevent basement backups and financial impacts, and to prevent public health issues.

MAGNA WATER DISTRICT
Sanitary Sewer System Defect Report

Date: _____

Time: _____

Location of Defect: _____

Identified by: _____

Description of Defect: _____

_____

_____

_____

_____

_____

Urgency of Needed Corrective Action:

Immediate Action Required: ☐

Repair or Correct Soon: ☐

Problem Stable: ☐

No Immediate Action Needed: ☐

Recommended Remedial Action: _____

_____

_____

_____

_____

Chapter 4 - Sewer Design Standards

Where not otherwise addressed in Division 4 of Magna Water District's Culinary Water and/or Sanitary Sewer System Extension Agreement referenced within, the District has adopted the Utah Administrative Code R317-3, as their standard for sanitary sewer design.

DIVISION 4: Sanitary Sewer System Design

04000 GENERAL

1. SCOPE:
    a. Includes But Not limited To -
        1) Furnish all labor, materials and equipment necessary for the sanitary sewer extensions as described herein or shown on the drawings to include:
        2) sewer mains; manholes; connections; laterals; cleanouts; etc.

04100 PIPEWORKS

PRODUCTS

1. CONCRETE SEWER PIPE:
    a. Non-Reinforced Concrete Sewer Pipe will not be allowed.
    b. Reinforced Concrete Sewer Pipe and Fittings shall conform to ASTM C76, Reinforced Concrete Culvert, Storm Drain and Sewer Pipe, Class III, Class IV or Class V as designated on the drawings.
    c. Joints shall be bell and spigot type with O-ring rubber gaskets and conform to ASTM C443, Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets. The requirements of ASTM C443 shall govern joint design, in case of conflict, for pipe otherwise meeting requirements of ASTM C14 or ASTM C76. Gaskets shall not be used if older than one year or if they have evident defects such as porosity, blisters, pitting or other imperfections. The joint shall be designed to provide for self-centering and when assembled, to compress the gasket to form a water tight seal.
    d. Cement shall be Type V, sulfate resistant, ASTM C150, Portland Cement.
    e. All pipe, fittings and accessories shall be new, shaped true to form with smooth, surfaces free of honeycomb and as manufactured or recommended by the pipe supplier. Any deformation or irregularity which could hamper flow through the pipe shall not be acceptable. Damaged or cracked ends which would prevent making a satisfactory joint will be rejected.
    f. Each section of pipe shall be clearly marked to show the class, date of manufacture, name or trademark of the manufacturer.
    g. All fittings shall be of the same type class as the abutting pipe sections, except where otherwise shown on the drawings.
        1) Wyes and tees shall be factory-fabricated and tested for strength and watertightness.
    h. Factory Testing. In addition to inspection and testing otherwise required by the ASTM Standards specified herein, the following test shall be performed by the manufacturer. Test methods, procedures and equipment shall be in accordance with ASTM C-497, Methods of Testing

Concrete Pipe or Tile. Test results shall meet applicable requirements of ASTM C14, ASTM C76 and ASTM C443.

1) External Load Crushing Strength. The pipe shall be tested for external load crushing strength, reporting the 0.01 inch crack strength.
2) Hydrostatic Test. Hydrostatic test of gasketed pipe shall be made on two sections of jointed pipe, in both straight alignment and maximum deflected position.
3) Concrete Compressive Strength. All pipe shall be tested for concrete compressive strength by crushing tests of cores cut from the pipe.
4) Certification. Pipe manufacturer shall furnish the District certificates of all test results. The certificates and pipe shall be so marked that the test results can be readily identified with the pipe supplied. The "Certificates of Test" shall be received by the District prior to the installation of any pipe covered by the certificates.

2. POLYVINYL CHLORIDE (PVC) SEWER PIPE:
    a. All PVC pipe and fittings shall be suitable for use as gravity sewer conduit, meet or exceed all of the requirements of the latest revisions of ASTM Specification D 3034 "Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings," have provisions made for contraction and expansion at each joint with a rubber ring, and be constructed with integral wall bell-and-spigot, push-on type joints.
    b. Pipe shall have a minimum SDR of 35 or better.
    c. Pipe shall show no signs of structural damage, splitting, cracking, or breaking at a minimum deflection of 30%, and as designated in the appropriate ASTM Specification.
    d. Pipe and fittings shall be homogeneous throughout and free from visible cracks, extrusion defects, holes foreign inclusions or other injurious defects, and as commercially practical be uniform in color, opacity, density, and other physical properties.
    e. Fittings: All fittings and accessories shall be as manufactured and furnished by the pipe supplier or approved equal, and shall have bell and spigot configurations compatible with that of the pipe, and be manufactured of the same materials as the pipe to which they attach. Fittings shall be the extruded type; fabricated fittings are not acceptable.
    f. Joints: The pipe and fittings shall be furnished with push-on type bell and spigot ends for joining with a solid, uniform cross-sectional rubber gasket as the sealing element. The rubber gasket shall meet the requirements of ASTM 3212. The bell shall consist of an integral wall section with the rubber gasket factory assembled and securely locked in to prevent displacement. The critical sealing dimensions of the bell, spigot and gasket shall be in accordance with the manufacturer's standard dimensions and tolerances. The gasket shall provide an adequate

compressive force against the sealing surfaces of the bell and spigot so as to effect a positive seal under all combinations of the joint tolerances. The gasket shall be the only element depended upon to make the joint flexible and watertight. Solvent welded joints will not be allowed unless written approval is obtained from the Engineer prior to welding the joint.

g. Pipe Tests: The pipe manufacturer shall furnish samples of pipe selected and conduct test that verify the pipe complies with the specified ASTM Standards. A typical joint assembly shall be subjected to a qualifying laboratory test of both internal hydrostatic pressure and internal vacuum or external pressure to confirm proper joint design and performance and is not intended to be used as a Quality Control Test for each joint.
   In addition, the rubber gasket joint shall show no signs of leakage when tested as follows:
   1) Internal Hydrostatic Pressure Test. The assembly shall also be subjected to pressure of 25 ft. hd. or 10.8 PSIG for 10 minutes without leakage.
   2) Internal Vacuum or External Pressure Test. The assembly shall also be subjected to pressure of 25 ft. Hd. Or 10.8 PSIG for 10 minutes without leakage.
   3) Pipe in Concentric Alignment. The assembly in concentric alignment shall be subjected to the test conditions of (1) and (2) without leakage.
   4) Pipe in Angularly Deflected position. After completing the test in (3) the assembly shall be deflected angularly to the maximum amount recommended by the manufacturer and subjected to the test conditions of (1) and (2) without leakage.
   5) Pipe in Offset Deflected Position. The joint assembly shall be deflected to maximum offset deflection recommended by the manufacturer and be subjected to these conditions described in (1) and (2) without leakage.

h. Pipe manufacturer shall furnish District certificates of all tests. The certificates and pipe shall be so marked that the test results can readily be identified with the pipe tested. The "Certificates of Tests" shall be received by the District prior to the installation of any of the pipe covered by the certificates.

i. Each pipe shall be clearly marked at 5 foot intervals to show the manufacturer's name or trademark, nominal pipe size, ASTM Designation, PSM, or PSP and have the material designation "PVC". All fittings shall be marked in a similar manner.

3. DUCTILE IRON, BELL & SPIGOT:
   a. Use ductile iron pipe when minimum cover and is less than 5 feet.
   b. Use ductile iron pipe when clearance from water line is less than minimum horizontal and/or vertical requirements.
   C. Pipe shall be class 50.

EXECUTION

1. Lay pipe in accordance with manufacturer's instructions and requirements specified elsewhere.

2. Install prefabricated wye branches in trunk line for existing and future service lines at locations designated on the drawing(s) or directed by Engineer/Inspector. Rotate 22-1/2° or 45° elbow in direction of flow at proper grade.

3. Extend service lines (laterals) from 4 inch or 6 inch wye branch placed in the trunk sewer to a location designated by the Engineer/Inspector to 15 feet into the property line to be served or at the edge of permanent easement. Laterals shall be laid at a uniform grade and alignment, free from of adverse grade and at a minimum slope of 1/4 inch per foot unless noted otherwise or approved by the Engineer/Inspector, and in no case less than 1/8 inch per foot.

4. Furnish and install a permanent marker embedded in the top of the concrete curb at the end of each service connection line. Where concrete curb is not in place when service line is laid, provide 2"X4"X10' wood temporary marker.

5. Install manholes and cleanouts where shown on drawing(s) in accordance with the District's Typical Details and as follows:
    a. The top of concrete cone section or flat slab top shall be a maximum of 12 inches below final surface elevation, unless otherwise directed by the Engineer/Inspector.
    b. In locations where the final surface is not in place at the time of manhole construction but surface grade has been established, locate and remove the frame and cover from the top section. Precast concrete risers or cast iron rings (not to exceed 2-6 inch rings) shall then be used to set top of manhole frame and cover flush with top of final surface.
    c. Frames and covers of manholes which are constructed in areas where final surface is existing shall be set with top of frame and cover flush with existing surface at time of manhole construction using precast concrete grade rings (not to exceed (2) 6-inch grade rings).
    d. After frame and cover have been set to final grade, cement grout around grade rings from top section to trim of frame and place and finish concrete collar as detailed.
    e. Provide flexible joint or coupling to manholes of the same size as the pipe per manufacturer's recommendations.

6. Clearance between sewer and culinary water lines shall comply to Utah's Division of Drinking Water and Division of Water Quality Standards.

7. TESTING: Furnish all labor tools, and equipment necessary to perform one of the following tests on all pipes and manholes including laterals and/or service stubs. The methods and equipment used shall be mutually determined by Inspector/Engineer and Contractor prior to any testing. Areas between successive manholes shall be tested. If the test fails, the leak shall be repaired and retested until compliance with the testing standards is met. The testing shall be done in the presence of the Inspector/Engineer and the following criteria shall be met:

   a. An infiltration test is required when pipeline is below the groundwater level. The amount of water leaking into the pipe shall be measured and shall not exceed the following maximums:

Type of Pipe	Allowable Infiltration - Gal./Day per Inch Diameter per Mile of Pipe
PVC	10
Concrete	100

   c. A low-pressure air test shall be performed on the pipe and manholes (by an independent testing agency of the Contractor or supplier). The section of pipe between successive manholes shall be sealed with plugs. One of the plugs shall have and orifice in order to pressurized the line. A second orifice in the plug shall be used for constantly reading the internal pressure of the pipe. This orifice shall be continuously connected to a pressure gauge with a range of 0 to 10 psi with an accuracy of + or - 0.04 psi. Pressurize the line under test to approximately 4 psi and then shut off the air supply and allow pressure to stabilize for 2 minutes. After the pressure has been stabilized, the air shall be disconnected and the timing shall be begin. The time of the test in minutes is as follows:

Type of Pipe	Time of Test in Minutes
PVC	# of inches in Pipe Diameter
Concrete	# of inches in Pipe Diameter divided by two

   The maximum allowable pressure drop during the specified time period shall be 1.0 psi.

I. VIDEO INSPECTION: The District shall perform a video camera inspection after the Contractor has completed flushing and testing of the main to verify it has been sufficiently cleaned and is in acceptable condition. The Contractor shall resolve any concerns or problems identified by the District during the video inspection.

04200 MANHOLES

PRECAST CONCRETE MANHOLE

Precast concrete manholes shall be constructed in accordance with the design, size, details, and at the locations indicated on the plans and specified herein. The manholes shall be constructed of precast eccentric or concentric manhole units.

Precast manholes shall conform to the size, shape, form and details indicated on the Developer's approved plans. Concrete for the precast manhole units shall be Class D concrete and shall conform to the provisions of DIVISION 5. The precast cylinder units, the precast concrete taper sections and precast eccentric flat top sections shall meet the strength requirements for ASTM C 478 "Precast Reinforced Concrete Manhole Risers and Tops." Design and manufacture shall be based on H-20 loading. The contractor shall submit shop drawings of the proposed precast manhole for the project.

All joints shall use a profile type joint design. Excavation and backfill shall be done in accordance with these Specifications. Each manhole section shall be set perfectly plumb. Sections of various heights shall be used in order to bring the top of the manhole ring and cover to the required elevation.

Manhole bases shall be constructed of Class A concrete to the dimensions indicated on the plans. Said concrete bases shall be formed and concrete placed on undisturbed soil and/or on aggregate base course compacted to 95 percent of maximum density. That portion of the base above the invert elevation of the pipe shall be formed to provide a smooth channel section as indicated on the plans. The forms shall be checked for accuracy of dimensions and relative smoothness prior to placing concrete for the base. Channels shall vary uniformly in size and shape from inlet to outlet if required. The manhole base concrete shall be placed as one monolithic unit.

Manhole frame and cover sets of the type, size, and quality as specified in the STANDARD DETAILS shall be installed at the locations indicated.

The elevations at which manhole frames and covers shall be set shall conform to the requirements set forth on the plans. Where the cover is in existing pavement or in the traveled way of the existing road shoulder, the cover shall be placed flush with the existing surface. Where the structure is outside the limits of the traveled shoulder but not in the roadside ditch, the cover shall be placed 1/10-foot or more above the existing ground surface. Where the manhole structure falls in the existing roadside ditch or right of way, the manhole cover shall be placed approximately 12 inches above the existing

ground surface. Manhole frames shall be set at the required grade and shall be securely set in the place provided herein, covers shall be installed and all necessary cleaning and scraping of foreign material from the frames and covers shall be accomplished to assure proper fit.

Pipe stubs shall be furnished and installed at manholes at the locations indicated on the Plans. All stubs shall be plugged.

All pipe and fittings, including installation and manholes shall conform to the provisions of the specifications of the designated pipe and fittings.

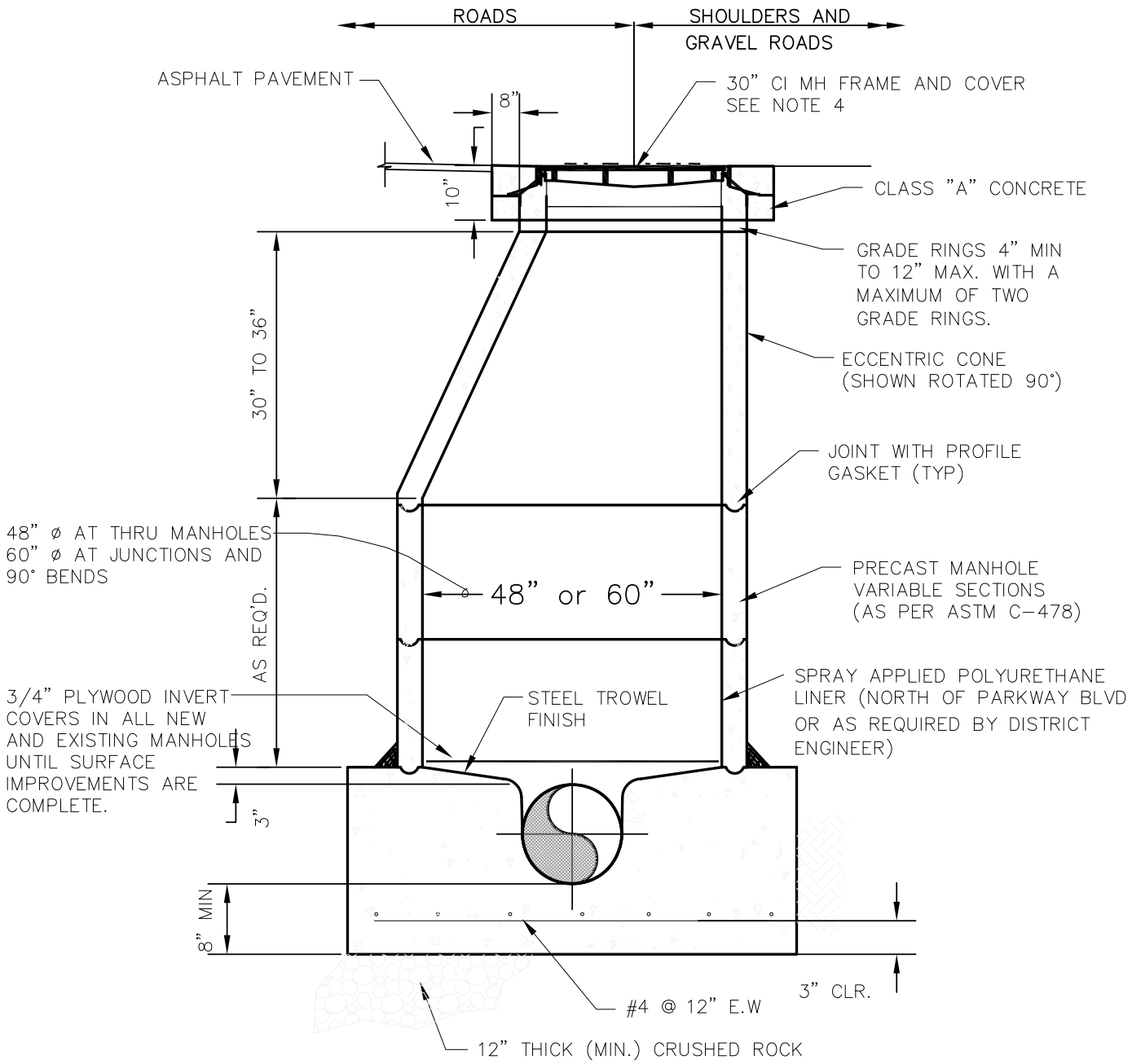
It is the intent of the Specifications that manholes and appurtenances be as watertight and free from infiltration or exfiltration as possible. The adequacy of manholes and appurtenances as to water tightness shall be determined by filling the manhole with water. When testing of the manholes is ordered, said test may be made in connection with the hydrostatic test of the sanitary sewer. Any evidence of leakage as a result of testing shall be repaired at the sole expense of the Developer. Any leaking following backfill shall also be repaired at the sole expense of the Developer.

Pipeline connections to existing manholes shall require matching the elevation of the top of the new inlet pipe to the top of the existing inlet pipe.

Manholes shall be provided without manhole steps to limit unauthorized entry into manhole without proper safety protocols in place.

All manholes north of Parkway Boulevard (2700 South to 2820 South) or as determined by the District Engineer shall be lined with a spray applied polyurethane lining system to prevent concrete corrosion from hydrogen sulfide gas attack. System shall be SPRAYROQ Spraywall Polyurethane Manhole Rehabilitation System or approved equal.

**End of Division 4*



NOTES:

1. LOCATE MANHOLE COVER ON DOWNSTREAM SIDE OF MANHOLE SET MANHOLE FRAME IN GROUT.
2. ALL JOINTS TO BE WATER TIGHT. EXTRA GROUTING & SEALING MAY BE REQUIRED BELOW WATER TABLE.
3. MANHOLE BASE AND 1ST SECTION OF MANHOLE TO BE FABRICATED AS AN INTEGRAL UNIT.
4. RING & COVER TO EXTEND 12" ABOVE FINISH GRADE FOR NONTRAVELED AREA. MATCH FINISHED ROADWAY GRADE IN TRAVELLED AREAS.
5. FLEXIBLE PIPE JOINTS AT ALL CONNECTIONS TO BE T-LOCK OR RUBBER BOOT.

PRECAST MANHOLE DETAIL

N.T.S.

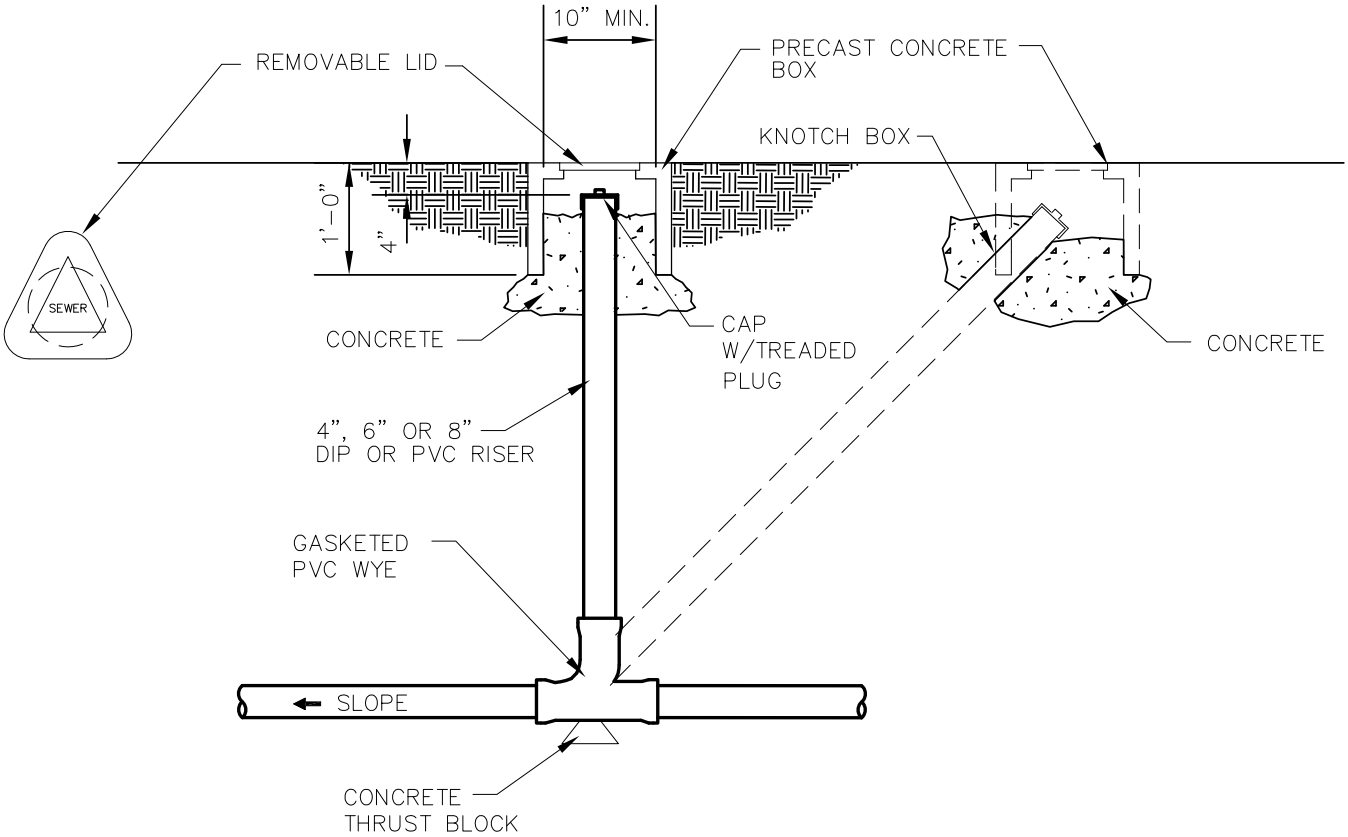
MAGNA WATER DISTRICT
2711 SOUTH 8600 WEST
P.O.BOX 303
MAGNA, UTAH 84044-303
(801) 250-2118

STANDARD MANHOLE DETAIL

DEPARTMENT: ENGINEERING

STANDARD DETAIL: 2

REVISION: MAY 2016



A — SEWER CLEANOUT

– N.T.S.

2711 SOUTH 8600 WEST
P.O.BOX 303
MAGNA, UTAH 84044-303
(801) 250-2118

SEWER CLEANOUT

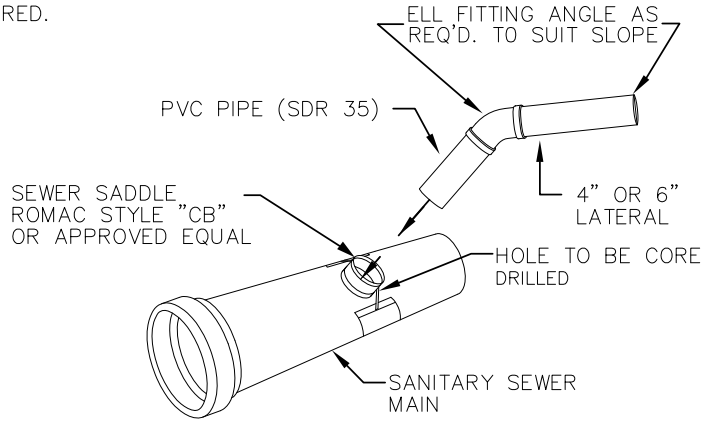
DEPARTMENT: ENGINEERING

STANDARD DETAIL: 3

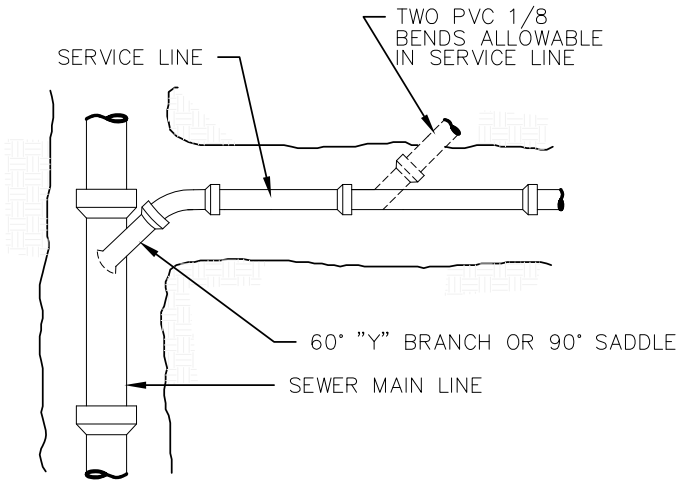
REVISION: MAY 2016

NOTES:

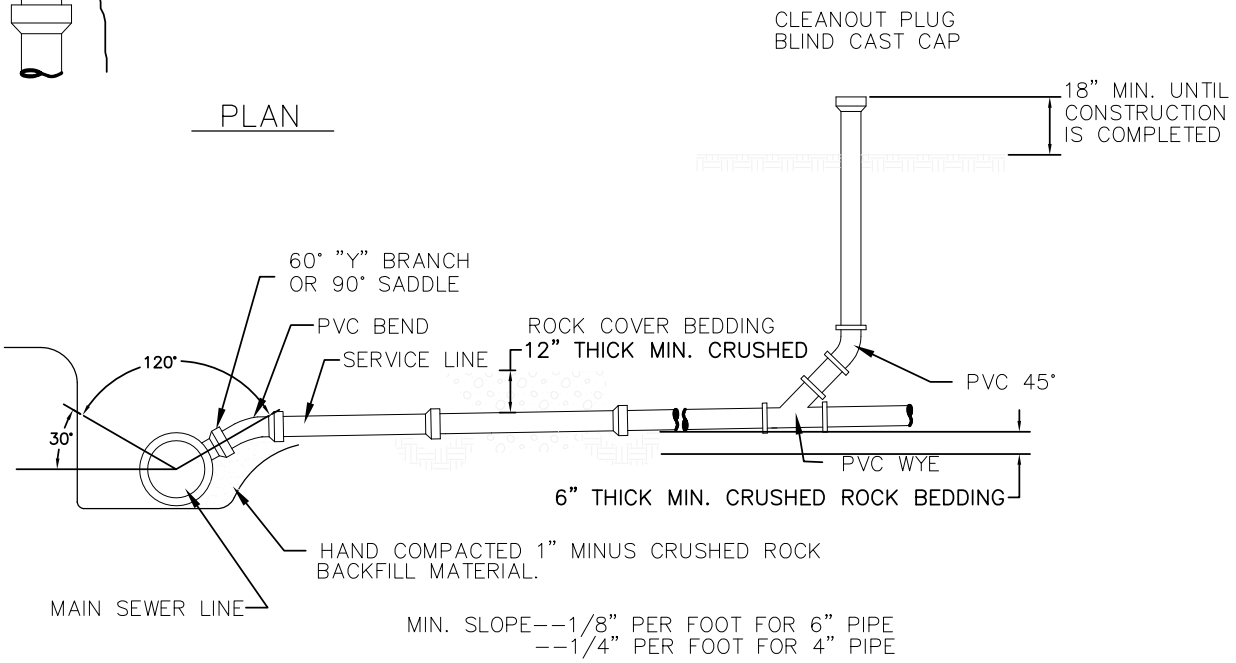
1. CLEANOUTS WILL BE REQUIRED WHERE SERVICE LATERALS EXCEED 50' FROM BUILDING TO PROPERTY LINE AND WHERE DEEMED NECESSARY BY THE INSPECTOR
2. CONNECTIONS TO EXISTING MAINS SHALL BE SEWER SADDLE TYPE MACHINE CORE DRILLED AND GASKETED.
3. PREFERRED ARRANGEMENT: CENTERLINE OF WYE BRANCH TO BE PLACED IN UPPER THIRD OF MAIN.
4. CONCRETE THRUST BLOCKING ON ALL BENDS REQUIRED.



SADDLE DETAIL

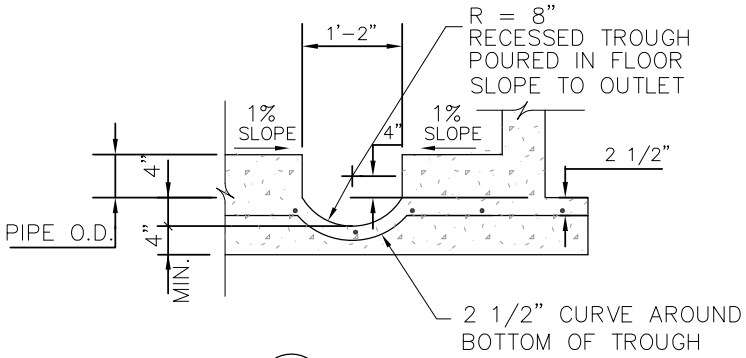


PLAN

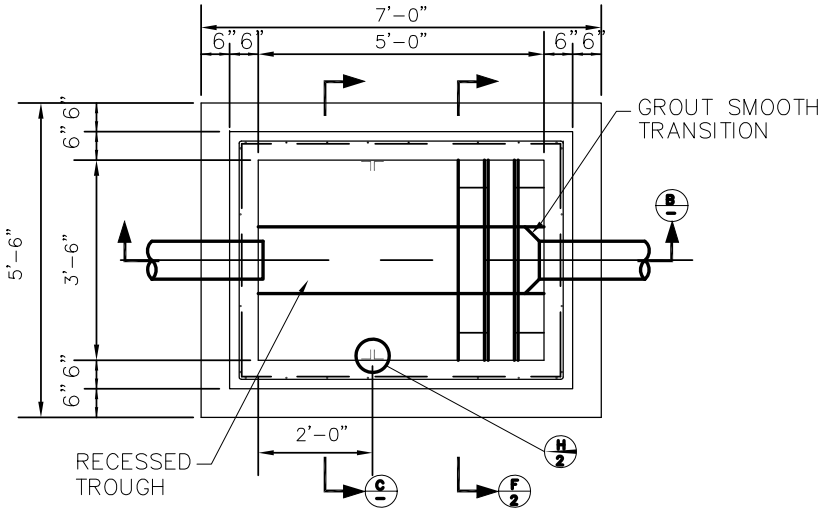


ELEVATION

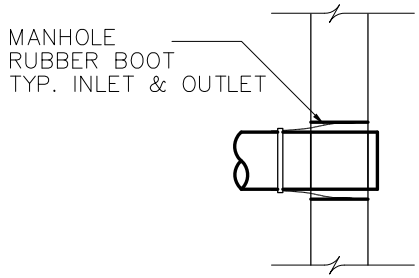
MAGNA WATER DISTRICT 2711 SOUTH 8600 WEST P.O.BOX 303 MAGNA, UTAH 84044-303 (801) 250-2118	SEWER SERVICE LATERAL	DEPARTMENT ENGINEERING	
		STANDARD DETAIL 4	REVISION MAY 2016



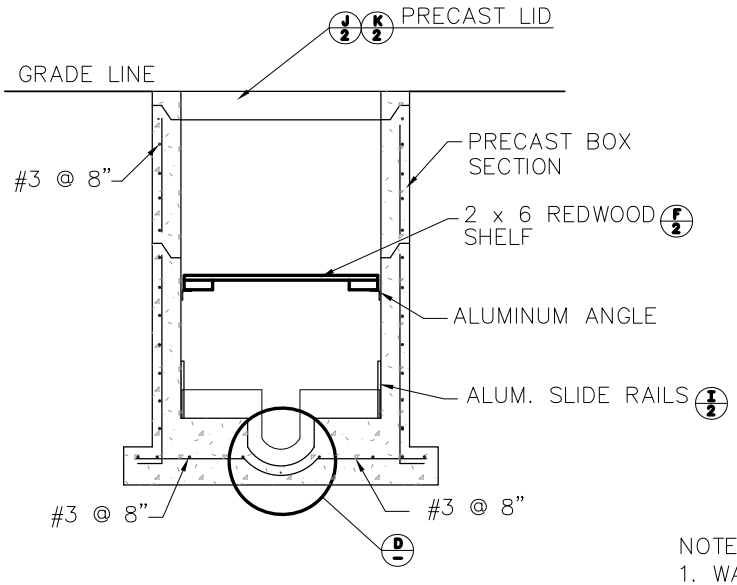
D / – SECTION
N.T.S.



A / – SAMPLE BOX PLAN
N.T.S.



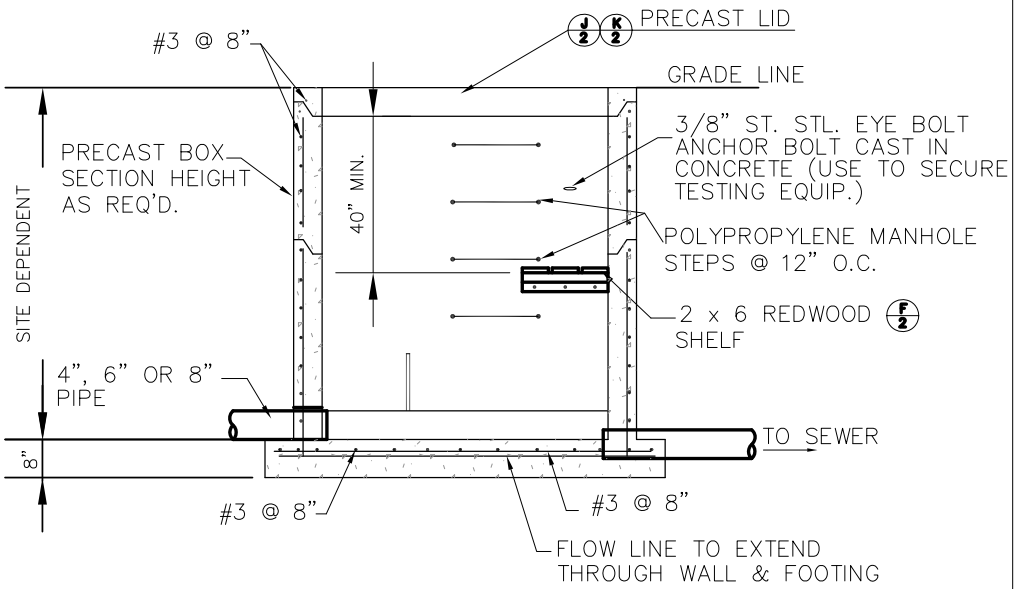
E / – RUBBER BOOT
N.T.S.



C / – SECTION
N.T.S.

NOTES:

1. WALLS & FLOOR POURED MONOLITHIC
2. USE MASTIC AT PRECAST JOINTS.
3. ALL JOINTS TO BE WATER TIGHT.

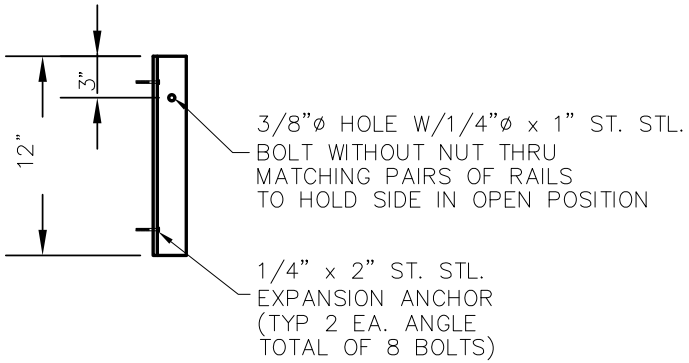


B / – SECTION
N.T.S.

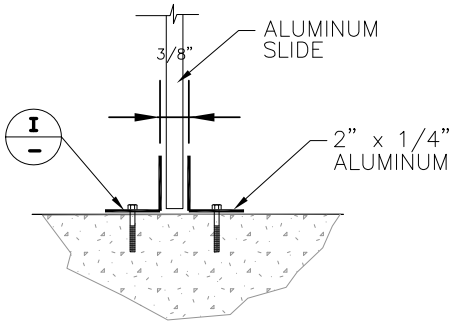
MAGNA WATER DISTRICT
2711 SOUTH 8600 WEST
P.O.BOX 303
MAGNA, UTAH 84044-303
(801) 250-2118

SAMPLE VAULT

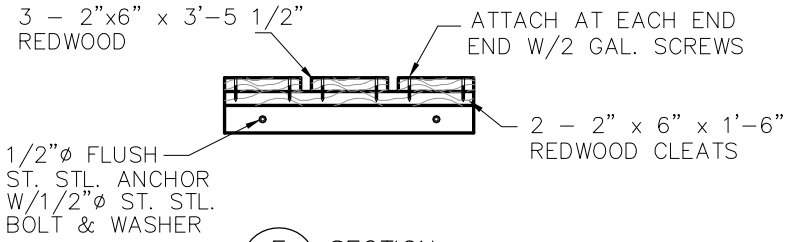
DEPARTMENT		
ENGINEERING		
STANDARD DETAIL	REVISION	DRAWING NO.
15	MAY 2016	1 OF 2



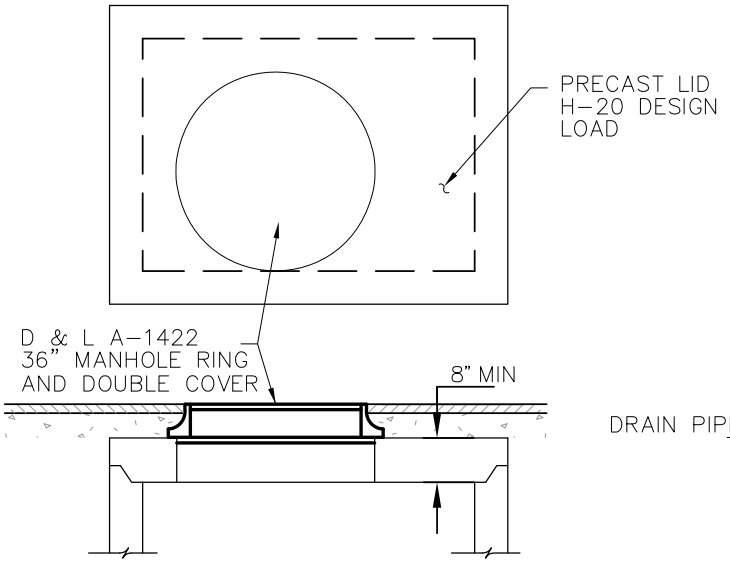
I / 1 ALUMINUM SLIDE RAILS
N.T.S. (TYP OF 4)



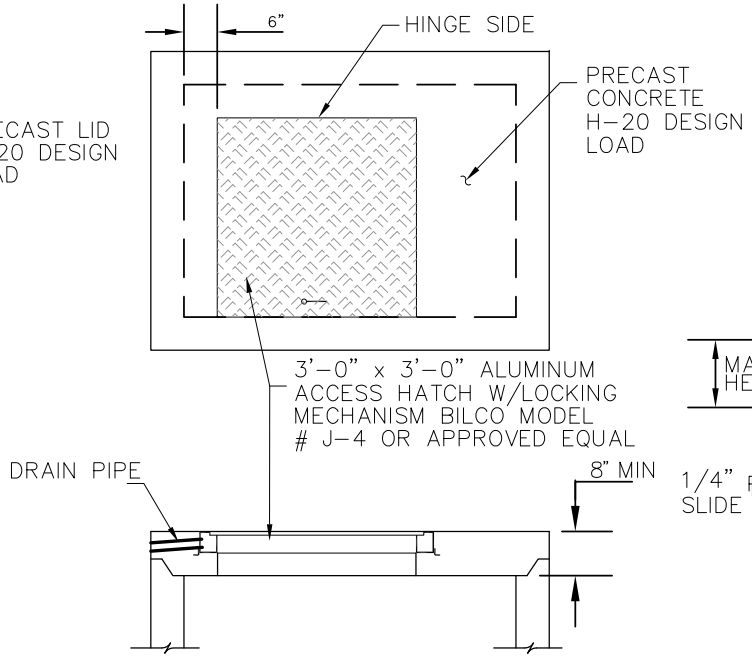
H / 1 DETAIL
N.T.S.



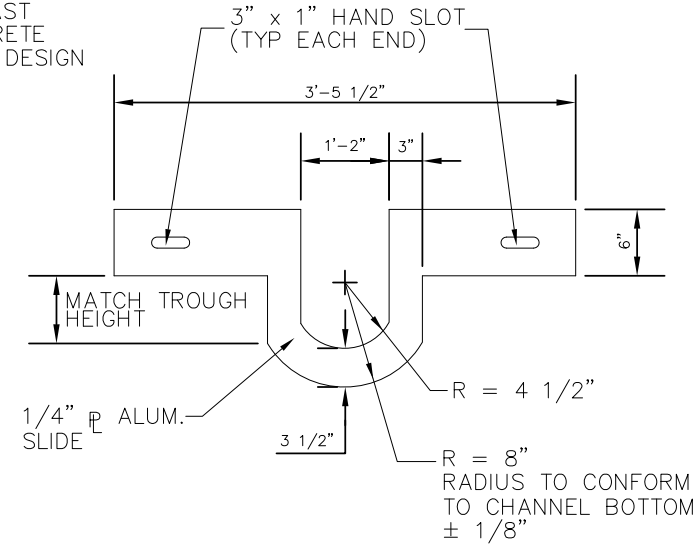
F / 1 SECTION
N.T.S.



J / 1 TRAVELED LID
N.T.S.

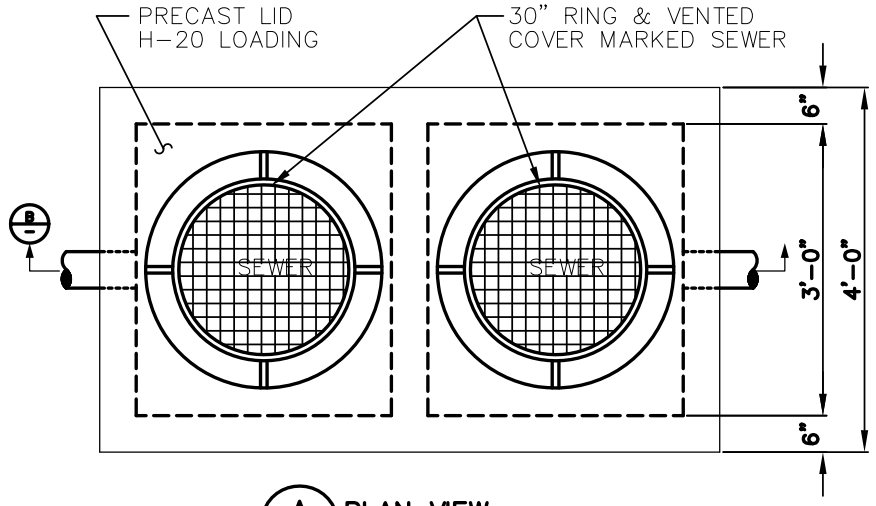


K / 1 NON TRAVELED LID
N.T.S.

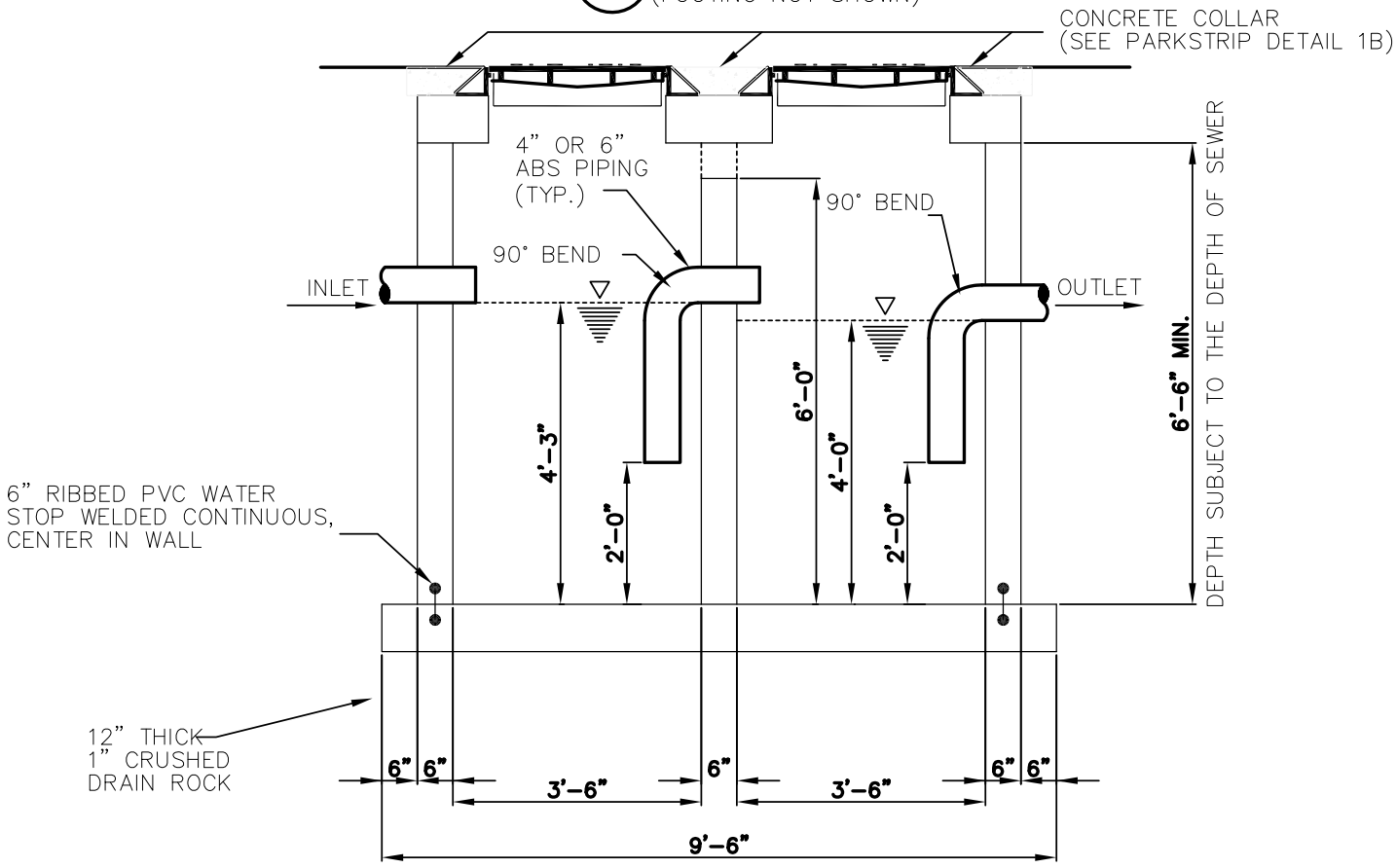


G / 1 ALUMINUM SLIDE
N.T.S.

MAGNA WATER DISTRICT 2711 SOUTH 8600 WEST P.O.BOX 303 MAGNA, UTAH 84044-303 (801) 250-2118	SAMPLE VAULT	DEPARTMENT ENGINEERING	
		STANDARD DETAIL 15	REVISION MAY 2016	DRAWING NO. 2 OF 2



A PLAN VIEW
(FOOTING NOT SHOWN)



B SECTION

PRECAST BOX DESIGN CRITERIA

1) H-20 LOADING.
2) WALLS SUBJECT TO SUBMERGENCE DEPTH OF 8 FEET.
3) NO HORIZONTAL JOINTS THROUGH THE PIPE OPENINGS.
4) WATERSTOP AT WALL/FLOOR JOINTS.

OIL & GREASE SEPARATOR

800 TO 1000 GALLON CAPACITY

MAGNA WATER DISTRICT
2711 SOUTH 8600 WEST
P.O.BOX 303
MAGNA, UTAH 84044-303
(801) 250-2118

OIL & GREASE SEPARATOR

DEPARTMENT: ENGINEERING

STANDARD DETAIL: 16

REVISION: MAY 2016

Chapter 5 - Sanitary Sewer Overflow Action Plan

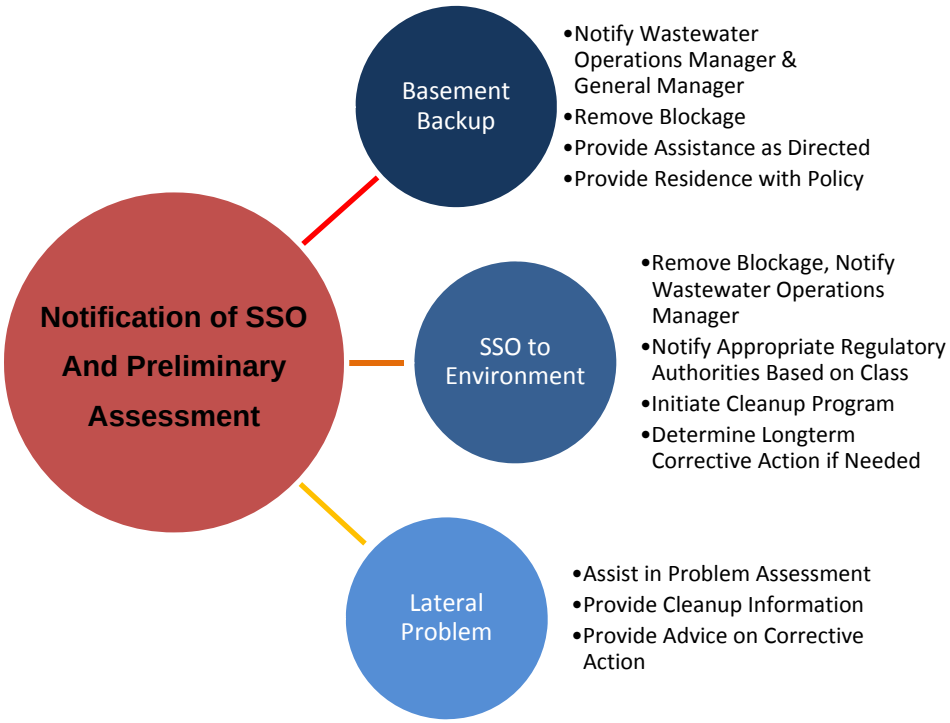
Whenever sanitary sewage leave the confines of the piping system, immediate action is necessary to prevent environmental, public health or financial damage from occurring. In addition, quick action is normally needed to mitigate damage which may have already occurred. For the purpose of this section, the following are part of the emergency action plan.

1. Basement backups
2. Sanitary sewer overflows
3. Sanitary sewer breaks which remain in the trench
4. Sewer lateral backups

All of the above conditions are likely to cause some damage. Each should be treated as an emergency, and corrective actions taken in accordance with Magna Water District directions. Items 1 & 2 above should be reported immediately based on whether they constitute a Class 1 or Class 2 SSO. As stated in the definition section of the SSMP Introduction, a Class 1 SSO is an overflow which affects more than five private structures; affects a public, commercial or industrial structure; results in a significant public health risk; has a spill volume more than 5,000 gallons; or has reached Waters of the State. All other overflows are Class 2 SSO's. All Class 1 SSO's should be reported immediately. Class 2 SSO's should be documented and reported in the annual SSMP report and included in the Municipal Wastewater Planning Program submitted to the State. Item 3 may be reported to the local health department if, in the opinion of the responsible staff member there is potential for a public health issue. An example of where a public health issue may be present is when an excavator breaks both a sewer and a water line in the same trench. In such cases, the local health department representatives should be contacted and the situation explained. If the health representative requests further action on the part of the District, staff should try and comply. If, in the opinion of the responsible staff member, the health department request is unreasonable, The Manager should be immediately notified. Care should always be taken to error on the side of protecting public health over financial considerations. When a basement backup occurs, the staff member responding should follow the Basement Backup Program procedures. Lateral backups, while the responsibility of the property owner, should also be treated as serious problems. Care should be taken to provide advice to the property owner in such cases, but the property owner is ultimately the decision maker about what actions should be taken.

Response Activities

There are specific steps that should be followed once a notification is received that an overflow may be occurring. The following figure outlines actions that could be taken when the District receives notice that a possible overflow has or is occurring.



General Notification Procedure

When a Class 1 SSO occurs specific notification requirement are needed. In such cases the following Notification procedure should be followed and documented. Failure to comply with notification requirements is a violation of R317-801.

Agency Notification Requirements

Both the State of Utah Division of Water Quality and the local health department should be immediately notified when an overflow is occurring. Others that may require notification include local water suppliers, affected property owners and notification may be required to Utah Division of Emergency Response and Remediation if hazardous materials are involved. The initial notification must be given within 24 hours. However, attempts should be made to notify them as soon as possible so they can observe the problem and the extent of the issue while the problem is happening. A notification form is provided to document notification activities. After an SSO has taken place and the cleanup has been done, a written report of the event should be submitted to the State DEQ within five days (unless waived). This report should be specific and should be

inclusive of all work completed. If possible the report should also include a description of follow-up actions such as modeling or problem corrections that has or will take place.

Public Notification

When an SSO occurs and the extent of the overflow is significant and the damage cannot be contained, the public may be notified through proper communication channels. Should the District need to provide notification it could include press releases to the local news agencies, publication in an area paper, and leaflets delivered to home owners or citizens in the area of the SSO. Notification should be sufficient to insure that the public health is protected. When and if Federal laws are passed concerning notification requirements, these legal requirements are incorporated by reference in this document. In general, notification requirements should increase as the extent of the overflow increases.

Overflow Cleanup

When an overflow happens, care should be taken to clean up the environment to the extent feasible based on technology, good science and financial capabilities. Cleanup could include removal of contaminated water and soil saturated with wastewater and toilet paper, disinfection of standing water with environmentally adequate chemicals or partitioning of the affected area from the public until natural soil microbes reduce the hazard. Cleanup is usually specific to the affected area and may differ from season to season. As such, this guide does not include specific details about cleanup. The responsible staff member in conjunction with the State DEQ, the local health department and the owner of real property should direct activities in such a manner that they are all satisfied with the overall outcomes. If, during the cleaning process, the responsible staff member believes the State or the County is requesting excessive actions, the Manager should be contacted.

Corrective Action

All SSO's should be followed up with an analysis as to cause and possible corrective actions. An SSO which is the result of grease or root plug may be placed on the preventative maintenance list for more frequent cleaning. Serious or repetitive plugging problems may require the reconstruction of the sewer lines. An overflow that results from inadequate capacity should be followed by additional system modeling and either flow reduction or capacity increase. If a significant or unusual weather condition caused flooding which was introduced to the sanitary sewer system incorrectly, the corrective action may include working with other agencies to try and rectify the cross connection from the storm sewer to the sanitary sewer or from home drainage systems and sump pumps. Finally, should a problem be such that it is not anticipated to reoccur, no further action may be needed.

Magna Water District

Basement Backup Remediation Policy

Based on the District's Sanitary Sewer Overflow Action Plan the following list of actions and emergency contacts shall be used as a guide to help home owners understand the actions that the District will take in the event of a basement backup.

- Remove blockage from sewer lateral
- The District will contact clean up company
- The District will file a claim with their insurance company to assess the backup

Emergency Contact List

Contact	Title	Phone Number
Raymond Mondragon	Collection System Lead	(801) 250-2118
Steve Williams	Wastewater Operation Manager	(801) 250-2118
Leisle Fitzgerald	Controller	(801) 250-2118
Clint Dilley	District Engineer	(801) 250-2118
Terry Pollock	General Manager	(801) 250-2118

Chapter 6 - Log of Contact with Other Agencies/People

A Copy of Magna Water District's Log of Contact with Other Agencies/People can be found on page 6-2

Magna Water District
Log of Contact with Other Agencies/People

Location of SSO:_____ **Date of SSO:** _____

Agency	Phone Number	Contact Made Yes/No	Time	Remarks
Utah DWQ	(801) 536-4300 or (801) 231-1769			
Salt Lake County Health Department	(385) 468-4100			
Utah DERR	(801) 536-4123			
Unified Police Department: Magna Station	(801) 250-1474			
Unified Fire Authority: Emergency Management	(801) 743-7111			
Magna Water District	(801) 250-2118			
US EPA Region VIII	Consult with DWQ			

Other Contacts:

Contact Made With	Phone Number	Contact Made Yes/No	Time	Remarks
Delta Disaster Services	(801) 841-3232			

Chapter 7 - Grease, Oil and Sand Management Program

Purpose:

The purpose of this program is to provide for the control and management of grease, oil and sand discharges to the District collection system. This program will provide a means to reduce interference with the collection system operation and pass through at the treatment plant.

Regulatory Authority:

Regulatory authority to implement this program is found in the Code of Federal Regulations in 40 CFR 403, General Pretreatment Regulations. State authority for the program is given in the Utah Administrative Code R317-8-8, Pretreatment. Local Authority Magna Water District Administrative Rules and Regulations 15.2.14, Grease, Oil and Sand Interceptors as referenced below.

15.2.14 Grease, Oil and Sand Interceptors

15.2.14.1 From and after the effective date of this regulation, grease, oil, and sand interceptors, as described by the Utah Plumbing Code, shall be required, both for any new or old business where its building is newly constructed, added to, or refurbished to the extent that a building permit is required under law, for any food processing or preparation establishment, or any other uses for the proper handling of liquid wastes containing grease, or any flammable waste, sand and other harmful ingredients; except that such interceptor shall not be required for dwelling units. All interceptors shall be of a type and capacity approved by the POTW Manager according to plans on file in the POTW's office, and shall be located as to be readily accessible for cleaning by User and inspection by POTW employees

15.2.14.2 All grease, oil, and sand interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, water tight and equipped with easily removable covers which, when bolted in place, shall be gas and water tight.

The interceptors shall include: a minimum of two chambers, sequenced to hydraulically flow through each chamber; piping and bends to dissipate flow energy/velocity to ensure settling of sand and other settle able particles; dissipaters to prevent scouring of accumulated floatables on the liquid surface; access hatches to each chamber; sized per manufacturers

recommendations based upon anticipated “maximum” flow through the interceptor.

15.2.14.3 Where installed, all grease, oil, and sand interceptors shall be maintained by the User at his sole expense, in continuous efficient operation at all times.

15.2.14.4 The User shall keep all manifests, receipts, invoices, and other related records of all cleaning, maintenance, grease removal of/from the grease interceptor, disposal carrier and disposal site location for no less than three (3) years. The User shall, upon request, make the manifests, receipts, invoices, and other related records available to any POTW representative, or inspector. These records should include:

(1) A log book of grease interceptor, grease trap or grease control device cleaning and maintenance practices;

(2) A record of Best Management Practices being implemented, including employee training;

(3) Records of sampling data and sludge height monitoring for oils and solids accumulation in the grease interceptors in each of the two chambers. (Note: accumulation depths in the first chamber should be higher than the second chamber. Accumulation of large quantities in the second chamber gives indication that the interceptor is undersized and potentially not intercepting all material adequately);

(4) Records of any spills and/or cleaning of the lateral or sewer system.

15.2.14.5 No User shall discharge wastewater from the grease, oil and sand interceptor into the POTW that exceeds 50 mg/L for oil and grease (vegetable or animal based) as set forth in the ADDENDUM E – CONTROLLED LIMITED POLLUTANTS and ADDENDUM F – CONTROLLED ADMISSABLE POLLUTANTS. Petroleum based oil and grease discharges are not allowed.

15.2.14.6 The User shall immediately notify the District of any discharge, accidental or otherwise, from the grease, oil and sand interceptor exceeding the limits of any pollutant as set forth in ADDENDUM E – CONTROLLED LIMITED POLLUTANTS or ADDENDUM F – CONTROLLED ADMISSABLE POLLUTANTS. The District shall immediately review the source, nature and extent of the discharge and document the required corrective action(s).

15.2.14.7 When a User's discharge from the grease, oil, and sand interceptor causes an obstruction or damage, or because of the nature of the discharge, toxic pollutants increase the costs for managing the effluent or the sludge of the POTW, the User shall pay for all costs associated with the discharge including but not limited to investigation, inspection, sampling, testing, cleaning, professional engineering and attorney fees, court costs, penalties, fines and any other District overhead and expenses.

15.2.14.8 It shall be a violation of the Rules and Regulations for any User to modify an interceptor without consent from the POTW, falsify maintenance or design records, or fail to provide maintenance or design records when requested by the District. Any person violating the provisions herein shall be liable for any expense, loss or damage caused by the POTW by reason of violation, including the increased costs, if any, for managing effluent or sludge, when such increases are the result of the User's discharge of toxic pollutants. The POTW Manager shall add such charge to the discharger's treatment charge.

15.2.14.9 In the event a food processing or preparation establishment installs or has installed a grease, oil, and sand interceptor pursuant to this section, said User shall not be compelled to install a monitoring facility or equipment as set forth in Section 15.5.4 of this regulation.

15.2.14.10 In the event that it is found the interceptor installed is not working adequately, due to larger flows being delivered to the unit than designed, the District may require the interceptor be replaced with a unit designed to match actual flows and loading.

Chapter 8 - System Evaluation and Capacity Assurance Plan

Magna Water District believes that one of the keys to preventing sanitary sewer overflows is to evaluate system capacity and to monitor flows throughout the system in order to ensure that capacities are not exceeded. Should a collection sub-system exceed the capacity of the pipes, the system will be immediately re-evaluated and corrective action taken.

The District has an active Sanitary Sewer Impact Fee Facility Plan (IFFP) located at their office that shall act as the District's SECAP. The District's Sanitary Sewer IFFP includes the followings.

1. Initial Capacity Modeling and Master Planning
2. Surcharge Flow Analysis
3. Re-evaluation Modeling and Analysis
4. Capacity Increase Evaluation and Implementation

The District will continually evaluate their system and update the IFFP as necessary to continue an adequate level of service throughout the District.

A copy of the District's IFFP can be reviewed at the Magna Water District Office: 8600 West 2711 South, Magna UT 84044.

Chapter 9 - SSMP Monitoring and Measurement Plan

The purpose of this plan is to provide appropriate monitoring and measurement of the effectiveness of the SSMP in its entirety.

Records Maintenance

Magna Water District intends to maintain appropriate records on operations and maintenance of the sanitary sewer system to validate compliance with this SSMP. However, failure to meet standards set by State DWQ or other regulatory agency during an inspection does not constitute a violation of the SSMP. Rather, deficiencies identified during inspections should be viewed as an opportunity for improvement.

Operations Records

Operations records that should be maintained include the following:

- Daily cleaning records
- CCTV inspections records
- Manhole inspection records
- Hot spot maintenance list
- Spot repairs
- Major repairs
- System capacity information
- SSO or basement backup records including notification documents to appropriate agencies (call logs, etc.)
- Capital Improvement Plan

Records will be maintained by the District in a central location. Records may be maintained either on an electronic record or as a paper record. The extent of the record should be sufficient to demonstrate the activity recorded was completed appropriately.

Performance Measurement (Internal Audit)

Periodically, but not less than annually, the District should assess and audit the effectiveness of the elements of this SSMP. All elements should be reviewed for effectiveness as well as all records should be reviewed for completeness. An internal audit report should be prepared preferably annually but no less than once every five years which comments on the following:

- Success of the operations and maintenance program
- Success of other SSMP elements
- Adequacy of the SECAP evaluations

- Discussion of SSO's and the effectiveness of the response to the event including corrective action
- Review of Defect reports and adequacy of response to eliminate such defects
- Opportunities for improvement in the SSMP or in SSO response and remediation

The annual audit report need not be extensive or long. It should, however be sufficient to document compliance with the standards set in the SSMP. The audit reports should be maintained in accordance with the District's records retention schedule.

SSMP Updates

When a plan deficiency is identified though an audit, inspection or plan review, and the deficiency requires an SSMP update, the plan may be updated at the discretion of the District Manager. SSMP updates should be recorded in a revision index maintained by the Wastewater Operations Manager.

SSO Evaluation and Analysis

At least annually in the internal audit and more frequently as needed, the District will evaluate SSO trends based on frequency, location and volume. Trend evaluation will be empirical unless a large number occur sufficient to make a statistical analysis viable. If a trend is identified, a corrective action may be appropriate.

Public Communication and Outreach

The District will reach out to the public about the development, implementation and performance of the SSMP. This communication may be accomplished by any of the following methods:

- Public hearings
- Public meetings
- Newsletters
- Direct mailing
- Leaflets
- Other effective methods

The District will accept comments, either written or verbal and will review such comments for applicability. Public interest may be difficult to generate, but should be sought, non-the-less.

Chapter 10 - SANITARY SEWER SYSTEM MAPPING

Magna Water District keeps sewer line records in two ways. One is the as-built drawings of all developments including utility drawings showing pipe size, material type and location. The drawings also include sewer line clean out locations and elevations, sewer manhole locations and elevations and invert-in and invert-out elevations.

Two is the District computer based mapping system. The District's Sanitary Sewer System is analyzed by the computer model AutoCAD Storm and Sanitary Analysis 2012. The model contains all of the piping of the distribution system and the outfall to the treatment plant. Pipe sizes, lengths and roughness are entered into the model. In the model pipes are joined to each other by manholes. The wastewater flows of the users of the Sanitary Sewer System are applied to the manhole closest to the location of the user's property. In the model, wastewater flows through the piping network is performed by the Kinematic Wave or Hydrodynamic routing methods.

Chapter 11 - Basement Backup Program

Basement backups are a serious impact on a home or business owner. As such, all reasonable efforts should be taken to prevent such backups from occurring. Sewer system backups are the result of several system problems. Such problems may include any one or a combination of the following:

1. Laterals serving real properties are owned by the property owner and lateral maintenance is their responsibility. Roots, low points, structural failure, and grease are primary problems lateral owners face.
2. Backups caused by main line plugs are usually caused by roots, grease, low points, foreign objects and contractor negligence.
3. Piping system structural damage may cause basement backups. Such structural problems include age or deterioration damage, installation damage, excavation damage and trenchless technology damage.
4. Excess flow problems may surcharge a piping system and cause backups into homes. Excess flows usually occur when major storm waters inflow into sanitary sewers. Sanitary sewers are not designed for such flow. In addition, some homeowners may illegally connect foundation drains and sump pumps to the sanitary sewer system.

Basement Backup Response

When the District is notified about a basement backup, staff will log the complaint in a complaint log. The person receiving the call may log the backup complaint or may ask administrative staff to document the complaint.

All backup complaints shall be investigated by staff. If the investigation determines that the case of the backup is only in the lateral, staff may offer technical information but should not take responsibility for cleanup or subsequent restoration.

When it is determined that the basement backup is the result of a mainline problem, the District will follow the policy approved by its governing authority. A copy of this policy should be given to the home owner. It should be noted that all action the District takes are on a no-fault basis. The District does not accept liability nor does it waive its governmental immunity.

Backup Prevention Design Standard

The District promotes system designs which minimize backups and insure proper operations. To this end the District has a design standard for all system construction. In addition, the District complies with state design standards contained in R317-3. Finally for laterals, the following policy applies:

Policy on the Installation of Backflow Valves

Reference Regulatory Documents:

The following regulations are referenced in the establishment of this policy:

- Utah Code Title 15A-2-103(c). This code section adopts the 2009 edition of the International Plumbing Code.
- The 2009 International Plumbing Code, section 715 Sewage Backflow.

Magna Water District Policy:

- The State of Utah has adopted the International Plumbing Code(IPC) as its plumbing building standard;
- Magna Water District uses the IPC as their statute for plumbing construction and installation;
- And the IPC requires the installation of a sewage backwater valve "where the overflow rim of the lowest plumbing fixtures are below the next upstream manhole in the public sewer."

Therefore, for new construction, the District requires the installation of backwater valves as stipulated by the IPC already propagated for all new construction.

NOTIFICATION OF SEWER BLOCKAGE OR BACKUP FOR MAGNA WATER DISTRICT	
Description of blockage or backup	
Date of blockage	
Estimate time of blockage	
Response time to clear blockage	
Cause of sewer blockage	
Number of residences/business impacted by sewer blockage	
Notification of government agencies.	☐ DEQ ☐ Health Department ☐ Other
Note: Use below in the event District becomes noncompliant due to failure to notify government agency(s) of sewer blockage, backup, or discharge	
Description of Non-Compliance	
Period of Non-Compliance (within 24 hours)	
Expected time of Non-Compliance will Continue	
Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance	
Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.	

Chapter 12 - NO-FAULT SEWAGE BACKUP CLAIMS PROGRAM

The purpose of this program is to assist in the cleanup of real and personal property, and/or compensate persons for the loss of real or personal property, destroyed or damaged as the result of a backup of Magna Water District facilities, regardless of fault, within the restrictions, limitations and other provisions of this policy.

Cleanup of Real and Personal Property:

(A) The Controller may, in accordance with the District's standard procurement procedures, engage the services of one or more cleanup contractors to perform cleanup services at the direction of the General Manager on an as-needed basis.

(B) Upon discovering backup described in this Policy, a property owner should immediately notify the District of such event.

(C) Upon notification of the occurrence of the event, the Controller may contact a cleanup contractor under contract with the District's pursuant to subsection (A) above, and direct the cleanup contractor to perform all cleanup work at the premises, in accordance with established cleanup criteria.

(D) In the event the property owner engages the services of a cleanup contractor prior to notifying the District of the event, the District may reimburse the property owner for actual expenses incurred by the property owner, but only up to the amount the District would have paid its own cleanup contractor under subsection (C) above.

(E) In the event any real or personal property cannot, in the reasonable judgment of the District, be restored to its pre-event condition, in accordance with the cleanup criteria, the District may pay to the property owner the estimated fair market value (not the replacement value) at the time of the event, of such real or personal property, with the exception that carpet and major appliances will be replaced with new like-kind items.

(F) In no event will the District pay, or reimburse the property owner for the payment of special or consequential damages.

Establishment of Cleanup Criteria:

The General Manager may, from time to time, establish cleanup criteria which will govern the District's cleanup and payment responsibilities under this Policy. In establishing such cleanup criteria, the General Manager may give due consideration to generally available health guidelines, recommendations from governmental and

academic experts, and other sources of guidance reasonably deemed by the General Manager to be balanced, unbiased, and protective of health and safety.

Application - Time Limitations:

Any request for reimbursement of cleanup expenses under this policy, or payment of fair market value, may be made by filing a written application in such form as prescribed by the District. Such application must be submitted to the District within thirty (30) days after the occurrence of the event.

Qualification for Assistance:

An application or request for assistance or payment under this Policy may qualify only if the District after due inquiry or investigation makes an affirmative determination that the event was the result of a backup of District facilities, and that none of the following circumstances apply:

(A) The loss was caused by either an act or omission of the property owner, the property owner's agent, or a member of the property owner's family or business;

(B) The property owner failed to file a claim hereunder in a timely manner, or failed to comply with any other procedural requirements of this Policy;

(C) The loss is the result of intentional or negligent acts of third parties; or

(D) The loss is wholly covered by private insurance.

Reduction in Assistance:

The District may limit any assistance, or reduce any payment, under this Policy based upon any of the following:

(A) The property owner did not act responsibly to prevent, avoid or minimize the loss;

(B) The property owner is unable to fully substantiate or document the extent of the loss;

(C) The loss is partially covered by private insurance.

Payment Does Not Imply Liability:

Any assistance or payment made under this Policy shall not be construed as, and does not imply, an admission of negligence or responsibility on the part of the District for any damage or loss. Any assistance or payment made under this Policy is strictly voluntary

on the part of the District to facilitate risk-sharing amongst non-governmental property owners in the District.. This Policy shall not in any way supersede, change or abrogate the state government immunity act, Utah Code Annotated, section 63-30-1 et seq., as amended, or its successor, and its application to the District, or establish in any person a right to sue the District under this Policy. Any assistance or payment made under this Policy and accepted shall constitute a full and complete release of any and all claims against the District, its officers, employees and agents arising from the incident.

Budget Expenditures:

The District authorizes a fund from which amounts may be drawn to make the foregoing assistance or payments. Such fund may be established from the ordinary rate structure of the District.

Claims from Other Governmental Agencies:

Notwithstanding any other provisions of this Policy, no application shall be accepted from the United States or any of its agencies, the State of Utah or any political subdivision.

Appendix D

Construction

SWPPP Inspection Form
New Development Pre-Construction Agenda
New-Preconstruction Roll
Storm Water PowerPoint
Topics Covered in Storm Water Training Video for employees and contractors
Storm Water Training Video – saved in City's Sharepoint site

SWPPP COMPLIANCE INSPECTION FORM

Project Name:	Address:	Date:
Owner:	Contractor (Gen/Sub):	Start time:
Site Contact:	Phone:	Stop time:
UPDES Permit #: Expiration:	Weather: ◯ Sunny ◯ Snowing ◯ Cloudy ◯ Raining ◯ Other:	
Date of last rain event:	Duration:	Approx. Rainfall (in):
Inspected By (Print):	Local Jurisdiction or County:	
Reason for Inspection: ◯ Scheduled ◯ Complaint/Tip ◯ Random	Receiving Waters:	
Inspection Code (circle one): ◯ SW sampling ◯ SW non-sampling	Inspector Code (circle): ◯ (S) State ◯ (L) Local	Type Code (circle): ◯ 1 - Municipal ◯ 2 - Industrial ◯ 3 - State

SWPPP, EROSION, SEDIMENT AND HOUSEKEEPING BMP's INFORMATION	YES	NO	N/A
1. Is the SWPPP on site and accessible, or is the SWPPP location posted in an obvious place and reasonably accessible (in a short time)?			
2. Are erosion control, sediment control, buffer controls and good housekeeping BMP's installed on the site as shown in the SWPPP?			
3. Has the SWPPP been updated to reflect the current site conditions (modifications dated & initialed on site map, new BMPs on site map, discontinued BMPs crossed off site map, new BMP details & spec's in SWPPP, SWPPP amendment Log, etc.)?			
4. Are on-site inspections being performed and recorded by a qualified person on a weekly or biweekly basis, reporting items required by permit? (Inspector name, qualifications and signature, weather, problems/repairs, corrective action, new BMPs, removed BMPs, discharges, etc.)			
5. Have all corrective action items from previous inspections been logged, addressed and documented within the time frame allotted?			
6. Are SW flows entering and leaving the construction site controlled, managed, or diverted around the site? (e.g. buffer zones perimeter controls, berms, silt fence, up gradient boundary diversion, down gradient boundary sediment control, etc.)			
7. Is there evidence of sediment discharge such as mud flows or soil deposits from the construction site in downstream locations?			
8. Is there evidence of vehicles tracking soil off the construction site?			
9. Is there soil, construction material, landscaping items, or other debris piled on impervious surfaces (roads, drives) that could be washed with SW to a storm drain or water body?			
10. Is there a need to repair, maintain, or improve erosion control BMPs (temporary stabilization, erosion blankets, mulch, vegetated strips, riprap, surface roughening, pipe slope drain, dust control, etc)?			
11. Is there a need to repair, maintain, or improve sediment control BMPs (silt fence, check dams, fiber rolls, sediment trap/basin, inlet protection, waddles, straw bails, curb cut-back, etc?			
12. Is there a need to repair, maintain, or improve good housekeeping controls (clean track out pad, sweeping, construction materials management, litter/trash control, portable toilet, staked down, fueling areas, concrete wash out area, proper curb ramps, spill prevention, etc)?			
13. Are there disturbed areas that have not had construction activities for 14 to 21 days without stabilization? (except snow or frozen ground)?			
14. Are there places where BMPs are needed and should be installed or not needed and should be removed?			

COMMENTS AND CORRECTIVE ACTIONS FOR SWPPP COMPLIANCE

Identify the problem and its location. If appropriate, describe (in general terms) what needs to be completed. However, only if qualified (e.g., you are a designer) should you be mandating specific BMPs to install. Include the date when corrections are made.

Inspector, please list all applicable SEV codes:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Inspector:

(Print Name) (Title) (Signature) (Date)

Operator:

(Print Name) (Title) (Signature) (Date)

modified 6/15/2014

(Attach additional sheets of narrative, pictures and checklists, as necessary)

ADDITIONAL COMMENTS AND CORRECTIVE ACTIONS FOR SWPPP COMPLIANCE

Site Name:	Date of Evaluation: Page of
Site Address:	

1. Describe how erosion control is achieved

2. Describe how sedimentation control is achieved

3. Described how dust control is achieved

4. Described how illicit discharges or open containers elimination is achieved

5. Describe how mud tracking reduction or elimination is achieved

6. Describe how frequent and by whom are the site inspections conducted

7. Describe where and how the inspection records are made available to the inspector

8. Describe any enforcement action taken based on this field inspection

EPA Form 3560-3 SEV Codes and Descriptions

DOR11	☐	Discharge without a permit	BR19B	☐	Failure to properly operate and maintain BMP's
DOR18	☐	Failure to apply for a Notice of Termination	BR19A	☐	Failure to properly install/implement BMP's
BOR12	☐	Failure to conduct inspections	EOR16	☐	Failure to submit required report (non-DMR)
BOC17	☐	Failure to develop any or adequate SWPPP/SWMP	AOR22	☐	Narrative effluent violation
BOC18	☐	Failure to implement SWPPP/SWMP	DOR12	☐	Failure to submit required permit information
BOR41	☐	Failure to maintain records	AOR12	☐	Numeric effluent violation
COR11	☐	Failure to monitor	BOR42	☐	Violation of a milestone in an order

WEST VALLEY CITY
Engineering

Development Pre-Construction Meeting Agenda

Date:		Time:	
Project:		Project #:	
Contractor:			
Address:		Phone(s):	

1. Contractor Project Representative: _____
2. 24 Hr. Emergency Contact Number(s): _____
3. City Inspector: _____
4. Assistant City Engineer: _____
5. SWPPP Inspector: _____
6. Street Lights: _____
7. West Valley City Engineering Standards:

   http://www.wvc-ut.gov/1592/West-Valley-City-Engineering-Standards

8. Utility Coordination:
   a. Water and Sewer District:
   b. Utopia:

9. Contractor Submittals:

SUBMITALS REQUIRED 48 HOURS BEFORE CONSTRUCTION BEGINS
WVC APPROVAL REQUIRED

   a. Traffic Control Plan
   b. Materials – **See Engineering Standards Part 6: General Construction Requirements**
      i. Fill Material – Sieve Analysis/Soil Classification/Proctor

ii. Asphalt – Mix Design
iii. Concrete – Mix Design
iv. Storm Drain – Pipes, Boxes, Inlets, Pipe Zone Material (Per APWA 382, or gravel with Geotextile Fabric – See Engineering Standards)

10. Permits:
    a. Right-of-Way Permit – (pwpermits@wvc-ut.gov)
    b. Storm Water Management Permit – Long Term

11. Storm Water Pollution Prevention Plan (SWPPP)
    a. Verify NOI issued from State
    b. Verify WVC Storm Water Management Permit – Construction Period
    c. Identify Contractor Environmental Control Supervisor (ECS)
        i. Name: _____
        ii. Phone: __(_____)_____-_____.
    d. Review SWPPP
    e. UPDES Inspections - UPDES Inspections will take place at a minimum once a month during the active construction progression.
    f. **This is your only warning! Citations will be issued for failure to comply with SWPPP or city ordinance.**

12. Inspection & Testing: **Must schedule 24 hrs. in advance (963-3318).**

13. Contract Plans & Specifications – **Per West Valley City/ APWA Standards**

WE HAVE REVIEWED THE ITEMS OF THE PRECONSTRUCTION MEETING AGENDA AND THEY HAVE BEEN EXPLAINED TO ME BY A WEST VALLEY CITY REPRESENTIVE.

_____ Date:_____

_____ Date:_____

_____ Date:_____

Inspection Scheduling Questions

Note: If contractor is unable to answer all questions listed below, no inspection shall be scheduled.

1. **Project Name** (This should include: Subdivisions, Developments, Permits, and City Projects).
2. **Contractor Company Name and Phone Number.**
3. **Name and phone number of person scheduling the inspection** (this person must be the responsible party at the jobsite).
4. **Type of Inspection** Concrete pour, compaction testing, subgrade deflection testing, storm drain pipe placement, trench backfill i.e. sewer, water, storm drain – mainline or lateral.
5. **Location of inspection site.**
6. **Permit Number (if applicable). (Example: PGEX 3201) Permit Number must be accompanied by all the information listed above!**

   Remember: All inspections required a 24 hour notice and cancellations require notification (801-963-3318)

WEST VALLEY CITY
Engineering

Attendance Roll

Pre-Construction Meeting

Date:		Time:	
Project:			

PLEASE PRINT

Representative Name	Company	EMAIL	Phone(s) & Fax

CONTRACTOR TRAINING

"STORM WATER MANAGEMENT"

Jerry A. Schlief, West Valley City Construction Section Manager

WVC Storm Water Program Overview

- The Clean Water Act (CWA) requires that states regulate the introduction of pollution generated by storm water.
- The EPA is responsible for administering the CWA and has delegated this responsibility to the states. The Utah Department of Environmental Quality is responsible for administering the CWA and requires cities to get authorization to discharge under the Utah Pollutant Discharge Elimination System (UPDES) General Permit.

Local Requirements

- Each city must implement its own Storm Water Management Plan consistent with the terms of the UPDES.
- Failure to comply with local requirements of the UPDES may result in significant fines.
- Developers must then have a Storm Water Management Permit and a Storm Water Pollution Prevention Plan (SWPPP) which include the team responsible for managing the relevant Best Management Practices.

Overview (continued)

- West Valley City is a co-permittee with Salt Lake County along with several other cities on the Jordan Valley Municipalities Utah Pollutant Discharge Elimination System (UPDES) permit.
- Each co-permittee is accountable for its own Storm Water Management Plan (SWMP).

Overview (continued)

- The fines are substantial for failure to comply with UPDES.
  - Permit violations can result in fines of up to $10,000.00 per day per violation; and
  - Up to $25,000.00 per day for willfully or negligently violating permit conditions.
  - In addition, the EPA can impose a $32,500.00 fine per day.
  - WVC Has an ordinance allowing the city to issue citations to contractors and others who violate their SWPPPs.

OUCH!

WEST VALLEY CITY
Engineering

Administrative Citation

Date: Time: (violation observed)

☐ Warning
☐ 1st Citation $100 (per violation) ☐ 2nd Citation $200 (per violation) ☐ 3rd + Citation $300 (per violation)

Payment of $_____ is due on _____ (see reverse side for payment instructions). Corrections indicated below are required by _____. If you fail to make the indicated corrections by this date, the next level citation may be issued. Other enforcement action may result if compliance is not achieved by the third citation.

PERSON CITED: LAST _____ FIRST _____ MI _____

PHONE #: _____ RELATION TO VIOLATION: _____

MAILING ADDRESS (CITY, STATE, ZIP): _____

BUSINESS NAME (if any): _____

VIOLATION ADDRESS: _____ PARCEL # _____

MUNICIPAL CODE SEC. VIOLATED:	VIOLATION DESCRIPTION	PENALTIES

Corrections Required:

_____

_____

_____

_____

Printed Name of Issuing Officer: _____ Signature of Issuing Officer: _____

Officer Phone #: (801)963-3318 Date Issued: _____

Signature of Person Citation Delivered To: _____

☐ HAND SERVED ☐ POSTED ON DOOR ☐ MAILED COPY

READ REVERSE SIDE FOR IMPORTANT INFORMATION

Engineering Division ♦ 3600 S. Constitution Blvd. ♦ West Valley City, UT 84119 ♦ Phone (801) 963-3318 ♦ Fax (801) 963-3540

Contractor Storm Water Training

- Training the Contractor is a KEY element in ensuring proper SWPPP implementation throughout the construction process.
- The *Storm Water Education* of the Contractor is an ongoing process that begins long before any dirt is disturbed.

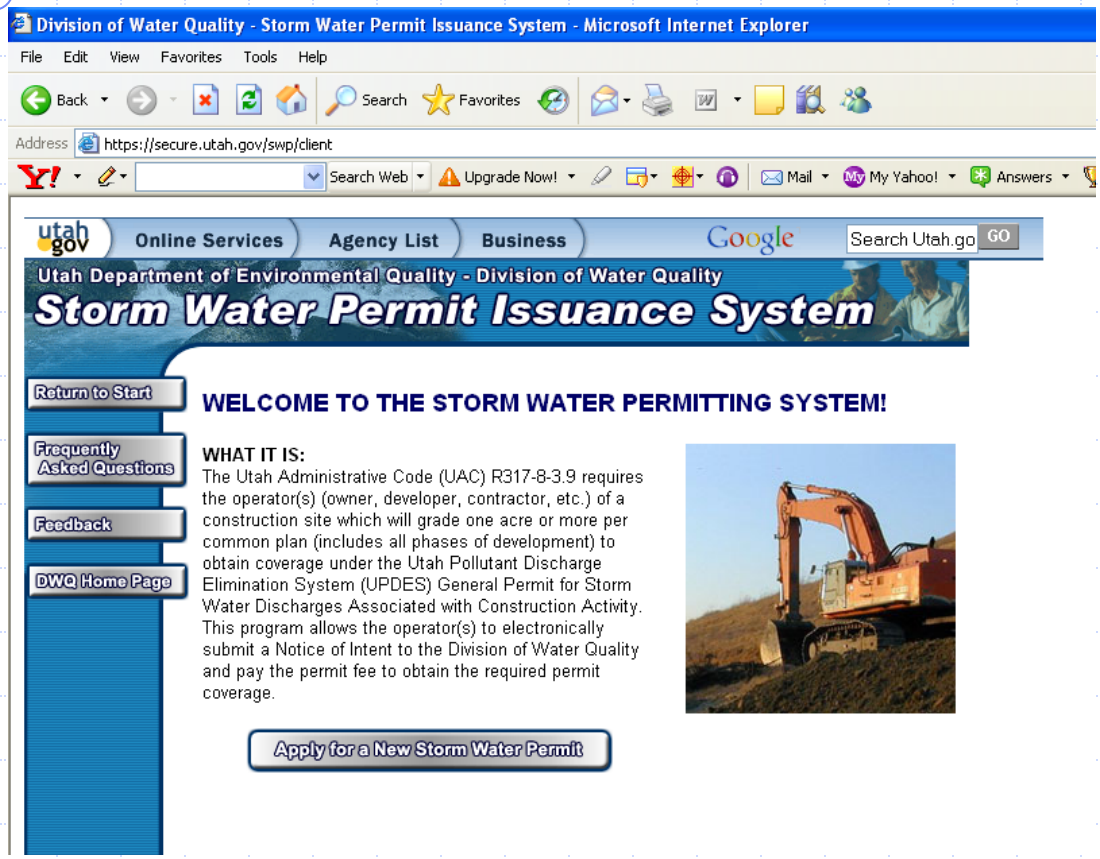
Pre-Construction Outline

- 1. Storm Water Pollution Prevention Plan (SWPPP)
- 2. Environmental Control Supervisor (ECS)
- 3. Notice Of Intent (NOI)
- 4. WVC Storm Water Permit
- 5. Review SWPPP with Contractor
- 6. Enforcement
- 7. Notice Of Termination (NOT)
- 8. Training Video

Housekeeping

- Do you have the ***Approved*** *Storm Water Pollution Prevention Plan* (SWPPP).
- Identify Project Environmental Control Supervisor.
  - 24 Hour Contact Information
- NOI – Show proof that a ***Notice of Intent*** (NOI) has been issued by the State to obtain coverage under the Utah Pollutant Discharge Elimination System (UPDES) General Permit for Storm Water Discharges Associated with Construction Activity.

Notice of Intent (NOI)



http://www.waterquality.utah.gov/UPDES/stormwater.htm

Review WVC Storm Water Management Permit

- Provide proof that a West Valley City Storm Water Management Permit has been issued.
- Identify Permit Holder and Storm Water Management Requirements.

Review SWPPP with Contractor

- Construction BMP's
  - Silt Fence – Sediment Control
  - Inlet Protection – Straw Waddles, Gravel Socks, etc.
  - Track Pad – Mud Tracking
  - Portable Toilets (Secure from Tipping)
  - Sweeping of Roads – Vacuum Sweeper
  - Erosion Control – Phase the Construction site
  - Dust Control – Water Truck
  - Construction Period BMP's are to be inspected at least weekly, also before and after each storm event
  - Others???

SWPPP

BY THE ENGINEER. UNDER NO CIRCUMSTANCES SHALL SITE DISTURBANCE OCCUR OUTSIDE THE DESIGNATED AREAS AT ANY TIME DURING CONSTRUCTION.

4. EXCAVATION AND EMBANKMENT OPERATIONS SHALL PROCEED IN SUCH A MANNER SO THAT FINISHING OF SLOPES, INCLUDING REVEGETATION SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER ROUGH GRADING. ALL SLOPES 2:1 OR FLATTER SHALL BE SCARIFIED WITH HEAVY EQUIPMENT, LEAVING TRACKS PERPENDICULAR TO THE SLOPE.

5. CUT SLOPES SHALL BE 1:1 MAXIMUM AND FILL SLOPES 2:1 MAXIMUM UNLESS ROCK IS ENCOUNTERED. CUT SLOPES IN ROCK MAY BE STEEPENED, DEPENDING UPON GEOTECHNICAL CONSIDERATIONS. THE TOPS OF ALL CUT SLOPES IN SOIL SHALL BE ROUNDED FOR A HORIZONTAL DISTANCE OF THREE (3) FEET BEYOND THE CATCH POINT. SLOPE ROUNDING SHALL OCCUR AS THE SLOPE IS BEING BROUGHT DOWN. THE OVERALL SHAPE, HEIGHT AND GRADE OF ANY CUT AND/OR FILL SLOPE SHALL BE DEVELOPED IN CONCERT WITH THE EXISTING NATURAL CONTOURS, SCALE AND VEGETATION OF NATURAL TERRAIN.

6. STABILIZATION PRACTICES MAY INCLUDE, BUT NOT BE LIMITED TO, TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, PRESERVATION OF NATURAL VEGETATION AND OTHER APPROPRIATE MEASURES. USE OF IMPERVIOUS SURFACES FOR STABILIZATION SHALL BE AVOIDED. EXCEPT AS PROVIDED BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE IN DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

A. WHERE DEEP SNOW ON FROZEN GROUND CONDITIONS PRECLUDE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY PERMANENTLY CEASES, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

B. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING WILL RESUME WITHIN 21 WORKING DAYS, TEMPORARY STABILIZATION MEASURES NEED NOT BE INITIATED ON THAT PORTION OF THE SITE.

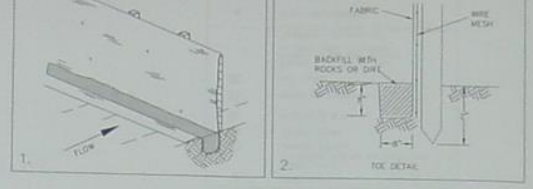
10. ANY SEDIMENT TRACKED OFF-SITE SHALL BE REMOVED PRIOR TO THE END OF THE WORK SHIFT OR PRIOR TO SUNSET, WHICHEVER COMES FIRST.

12. CONTRACTOR MAY ADJUST THE LOCATIONS OF THE CONSTRUCTION FENCE, CONSTRUCTION TRAILERS, AND CONSTRUCTION MATERIALS RECEIVING AND STORAGE AREAS, AS NEEDED TO ACCOMPLISH THE CONSTRUCTION. ALL CHANGES SHALL BE NOTATED ON THE STORM WATER POLLUTION PREVENTION PLAN.

13. CONTRACTOR SHALL INSPECT AND MAINTAIN ALL CONSTRUCTION PERIOD BEST MANAGEMENT PRACTICES AT LEAST EVERY 14 DAYS AND BEFORE AND AFTER EACH STORM EVENT. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN A LOG ON SITE OF ALL INSPECTIONS AND MAINTENANCE WITH THE SWPPP.

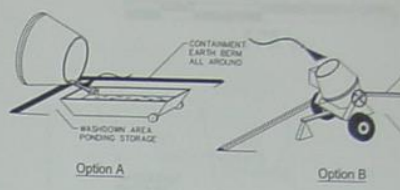
CONSTRUCTION SCHEDULE

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CONSTRUCT SILT FENCES ALONG WEST PROPERTY LINE AS INDICATED.
3. INSTALL GRAVEL FILLED WATTLES AROUND EXISTING INLETS.
4. CUT ROADS.
5. INSTALL STORM DRAIN
6. PLACE GRAVEL FILLED WATTLES AROUND NEW INLETS.

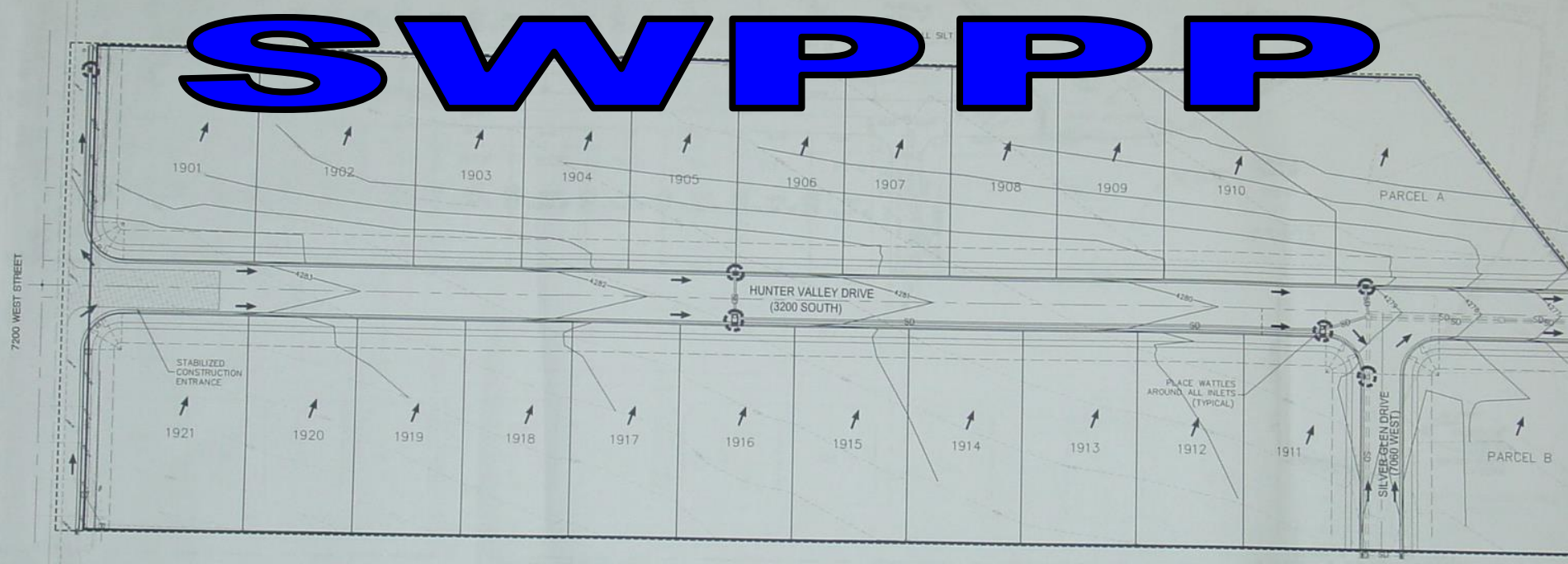


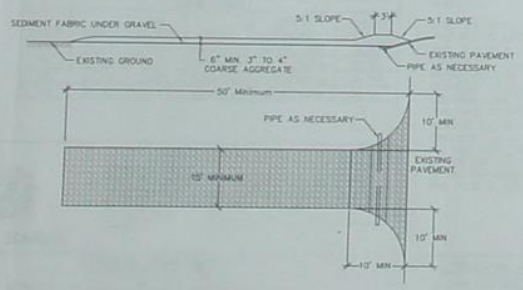
SILT FENCE

SILT FENCE MAY BE INSTALLED FOR PERIMETER CONTROL. A MINIMUM 20-FOOT VEGETATED BUFFER MAY ALSO BE SUBSTITUTED FOR PERIMETER CONTROL (PRESERVATION OF EXISTING VEGETATION).



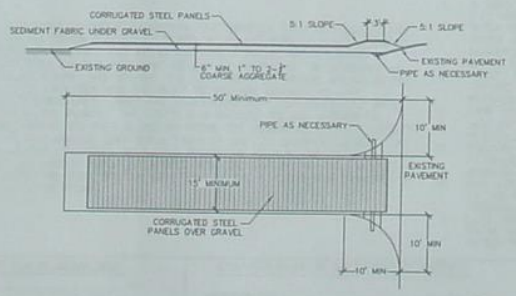
CONCRETE WASTE MANAGEMENT





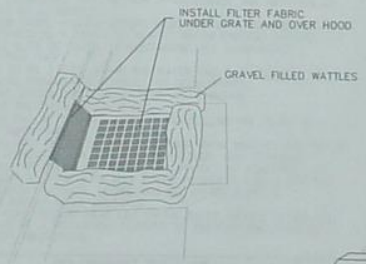
STABILIZED CONSTRUCTION ENTRANCE - OPTION 'A'

STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL SUCH TIME AS ROADS ARE ASPHALTED AND INDIVIDUAL HOME LOTS ARE BEING DEVELOPED.



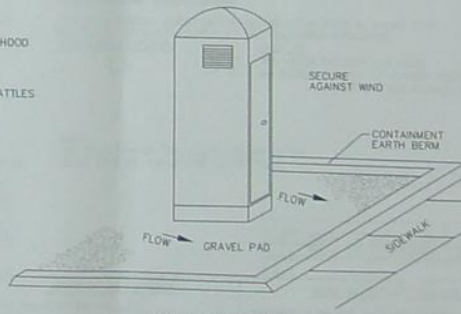
STABILIZED CONSTRUCTION ENTRANCE - OPTION 'B'

STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL SUCH TIME AS ROADS ARE ASPHALTED AND INDIVIDUAL HOME LOTS ARE BEING DEVELOPED.



INLET PROTECTION - WATTLE

WATTLE TO BE GRAVEL FILLED. INSTALL WHEN CONSTRUCTION OF CURB AND GUTTER AND ROADWAYS IS COMPLETE.



PORTABLE TOILET

PORTABLE TOILETS TO BE INSTALLED DURING HOMEBUILDING PHASE.

Enforcement

- YOU are solely responsible for the maintenance of all BMP's on your site.
- **Citations** will be issued for:
  - failure to implement or maintain BMP's detailed in your approved SWPPP.
  - Violations of the West Valley City Title 18 (Storm Water Management Ordinance).
  - Violating the West Valley City Storm Water Permit.

NOTICE OF TERMINATION (NOT)

- Documentation to the State that the site has been inspected and is eligible for a NOT.
- Document that the site has been properly cleaned and Construction BMPs removed.
- Document that Post-Construction BMPs have been installed and inspected.

Notice of Termination (NOT)
Continued

- The NOT Form is only to be filled out when the operator has completed the project and has notified the MS4 that they wish to apply for a Notice of Termination (NOT). With this notification, the inspector will only be required to complete the Background information and NOT portion of the form. A copy will be given to the operator to be sent to the State to obtain the NOT.

A Few ***Guaranteed*** Ways to Get a Citation…

CASE
5 4:03PM

J4634
JOHN
4 11:36 AM

9 11:13 AM

FEB 8 2007

21 11:25 AM

301-978-3343
OCT 16 2008

OCT 16 2008

OCT 16 2008

OCT 16 2008

UNAPPROVED CONCRETE WASH OUT
OCT 16 2009

Training Video

- *"Ground Control"*
  - Storm Water Pollution Prevention for Construction Sites
    - Available from Excal Visual

TOPICS COVERED IN THE WEST VALLEY CITY

STORMWATER TRAINING VIDEOS

West Valley City has obtained Three Stormwater Training Videos from Excal Visual to help train both the contractor and employee. These three videos cover all aspects of the MS4 requirements. West Valley City has also put together a PowerPoint presentation identifying several storm water practices to be followed while working on construction projects in the city.

- Ground Control – Stormwater Pollution Prevention for Construction Sites:
  Topics discussed in this video:
  - Compliance With Stormwater Regulations
  - General BMP Awareness Training
  - Site-Specific BMP Training
  - SWPPP – Storm Water Pollution Prevention Plan
  - Clearing and Grading undeveloped land and its effects on the environment.

- Storm Warnings – Stormwater Pollution Prevention:
  This video focuses on describing and giving common examples of the basic categories of BMPs. Topics discussed in this video:
  - Good Housekeeping
  - Materials Management
  - Spill Response
  - Equipment Fueling and Repair
  - Outdoor Manufacturing
  - Preventive Maintenance
  - Waste Management
  - Dust Producing Process

- Storm Watch – Municipal Storm Water Pollution Prevention:
  This video focuses on several types of BMPs used for Municipal facilities:
  - Good Housekeeping and Spill Prevention
  - Illicit Discharge Detection
  - Landscaping and Lawn Care Application
  - Vehicle and Equipment Maintenance
  - Vehicle and Equipment Washing
  - Spill Reporting and Response
  - Outdoor Storage of Materials and Wastes

Appendix E

Long Term Management

RSW/RSI Certifications
Storm Water permit via online portal, https://pllportal.wvc-ut.gov/portal
Inspections available by request via Cityworks

Certified

under the direction of

The Utah Chapter of the American Public Works Association

and the

Utah Storm Water Committee

in coordination with the

State of Utah Department of Environmental Quality, Division of Water Quality

Randall Petersen

has passed the competency examination, and met all further requirements, to qualify as a

Registered Storm Water Inspector

M. Scott Bird, USWAC Chair

Jun 30, 2022

Expires

Certified

under the direction of

The Utah Chapter of the American Public Works Association

and the

Utah Storm Water Committee

in coordination with the

State of Utah Department of Environmental Quality, Division of Water Quality

Michael Ferguson

has passed the competency examination, and met all further requirements, to qualify as a

Registered SWPPP Writer

Tom Beesley, P.E., USWAC Chair

May 13, 2021

Expires

Certified

under the direction of

The Utah Chapter of the American Public Works Association

and the

Utah Storm Water Committee

in coordination with the

State of Utah Department of Environmental Quality, Division of Water Quality

Robert Zito

has passed the competency examination, and met all further requirements, to qualify as a

Registered Storm Water Inspector

M. Scott Bird, USWAC Chair

Jun 30, 2022

Expires

Certified

under the direction of

The Utah Chapter of the American Public Works Association

and the

Utah Storm Water Committee

in coordination with the

State of Utah Department of Environmental Quality, Division of Water Quality

Ryan Ramirez

has passed the competency examination, and met all further requirements, to qualify as a

Registered Storm Water Inspector

M. Scott Bird, USWAC Chair

Jun 30, 2022

Expires

The Utah LTAP Center
Certifies that

Ryan Medeiros

has completed the

Registered Storm Water Inspector

course

with 8 hours of instruction

Utah LTAP Center Director

Apr 16, 2019

Utah LTAP

This certificate is for coursework only. It does not indicate SWPPP certification

Certified

under the direction of

The Utah Chapter of the American Public Works Association

and the

Utah Storm Water Committee

in coordination with the

State of Utah Department of Environmental Quality, Division of Water Quality

Tim Bleazard

has passed the competency examination, and met all further requirements,
to qualify as a

Registered SWPPP Writer

M. Scott Bird, USWAC Chair

Sep 30, 2021

Expires

Appendix F

Good Housekeeping

Public Works Structural Control Evaluation
Existing Flood Control Facility Evaluation
City Owned or Operated Facilities
City Owned Facility Pollution Potential Assessment
Retrofit Plan
Graffiti – Taginator MSDA
High Priority Grates
WVC Pet Waste Signs
Parks Maintenance SWPPP
The Ridge SWPPP
Stonebridge SWPPP
Public Works Operations SWPPP
WVC Facility Floor Drain Maps

West Valley City
Public Works Project Storm Water Quality Evaluation

Date: _____

Project Name: _____

Project Number: _____

Design Engineer: _____

Project Description:

Is the project within a watershed that is 303(d) listed? _____

If yes:

Name of receiving water(s): _____

Listed Impairment(s): _____

Does the watershed have an approved TMDL? _____

If yes:

Approved TMDL(s): _____

Project Information

Type of Project (New Construction, Reconstruction, Drainage): _____

Area of Land Disturbance (ac): _____

Subsurface Information

Depth to Groundwater (ft): _____ Historical High Depth to Groundwater if known (ft): _____ Source: _____ Groundwater Contamination at Site? _____	**Soil Information** Infiltration Rate (in/hr): _____ Hydrologic Soil Group: _____ Source: _____ Soil Contamination at Site: _____

Drinking Water Within Drinking Water Source Protection Zone? _____	**Additional Relevant Site Information:**

West Valley City
Public Works Project Storm Water Quality Evaluation

Structural Control Evaluation:

Structural Control:	Used on project?	Comments:
Rainwater harvest and reuse		
Rain Garden		
Bioretention Cell		
Bioswale		
Vegetated Strip or Swale		
Tree Box Filter		
Infiltration Basin		
Infiltration Trench		
Dry Well		
Underground Infiltration Galleries		
Minimize impervious area		
Preserve natural areas undisturbed		
Reduce directly connected impervious area		
Hydrodynamic separator		
Baffled Vault Systems		
Sediment Traps		
Drop Inlet Insert		
Trash Rack		
Revegetation or Soil Stabilization		
Oil and Suspended Pollutant Removal		
Pervious Pavement		

West Valley City Public Works Department - Evaluation of Existing Flood Control Facilities	
Existing Structural Controls Evaluation	**Potential Water Quality Changes (evaluated 2019)**
Riter Canal Detention Basin	Create Bioswale to treat low flows
Highbury Riter Canal control structure and lakes	Trash Removal improvements
Granger Elementary Detention Basin	Trash Removal improvements
Holder Drive Detention Basin	Improve sediment removal and installation of low water use landscape to eliminate need for sod maintenance.
Meadowlands Detention Basin	Constructed settling pond and bio swale. Additional improvements after UDOT expansion of pond.
4100 South 6000 West Detention Basin	Improve infiltration basin (doesn't drain quickly)
Terrace Ridge Park Detention Basin	Continue maintenance of Hydro dynamic separator
Vistas Detention Basin (6000 West 4300)	Continue removal of trash. Installed low water plants.
Westview Park Detention Basin	Improve sediment removal
Cottonwood Pond	Cleanup project and wetland planting project performed. Continue maintenance.
Sugar Plum/Hunter Village Detention Basin	Trash Removal improvements
Metro Park Pond	Designed pond improvements. Not built due to lack of funding.
Decker Lake (Salt Lake County Flood Control Facility)	
Back Nine Desilting Structure	Potential CMP Failure
Desilting Structure - 4400 West 2900 South	
Desilting Structure - 4500 West 2900 South	

City Owned or Operated Facilities

City Buildings

- City Hall – 3600 S. Constitution Blvd.
- Fire Stations
    - Station 71 – 4160 South 6400 West
    - Station 72 – 4100 South 4314 West
    - Station 73 – 2834 South 2700 West (including training facility)
    - Station 74 – 5545 West 3100 South
    - Station 75 – 3660 South 1950 West
    - Station 76 – 5372 Upper Ridge Road
- Public Safety/Justice Court Building – 3575 S. Market St.
- Harman Home – 4090 South 3600 West
- Utah Cultural Celebration Center – 1355 West 3100 South
- Family Fitness Center – 5415 West 3100 South
    - Centennial Pool
- Animal Shelter/Housing Authority – 4522 West 3500 South
- Public Safety Storage Yard – 5900 West 5400 South
- USANA Amphitheatre Parking Lots – 5150 South 6055 West
- West Sub Station – 5300 West 3100 South
- West Valley City Courts – 3590 Constitution Blvd
- Parks Operations Facility – 6750 West Parkway Blvd
- Public Works Operations Facility – 2805 South 3600 West
- Police Department Headquarters – 3577 South Market Street
- Fairbourne Station Parking Structure – 3500 South Market Street

City Owned Buildings Operated by Others

- The Maverik Center – 3200 S. Decker Lake Dr.
- Harman Hall– 3333 S. Decker Lake Dr.

Golf Courses

- Stonebridge – 4415 Links Dr.
- West Ridge – 5055 S. Westridge Blvd.

City Parks

Back Nine Park 4105 West 3010 South	Kings Pointe Park 1330 West Rothchild Dr. (3665 South)
Bridle Farms Park 6690 W. Hunter View Dr.	Maple Meadows Park 2520 West 3380 South
Centennial Park 5405 West 3100 South	Meadow Lands Park 3350 South 5800 West
City Park 4500 West 3500 South	Parkway Park 3405 West Parkway Blvd. (2700 South)

Country Meadows Park 4175 West 3980 South	Peachwood Park 3510 West 3965 South
Fairbourne Station Promenade Park 2905 W Lehman Ave.	Scottsdale Park 3755 West 3100 South
Falcon Crest Park 4055 South 7060 West	Sugar Plum Park 3755 West 2900 South
Fassio Farm Park 3720 South 5200 West	Terrace Ridge Park 6260 W. Terrace Ridge Dr. (4365 South)
Fox Tail Park 6880 W. Terrace Ridge Dr. (3045 South)	Trailblazer Park 3164 S. Trailblazer Cove (6675 South)
Glenn Weaver Memorial 6380 Cape Ridge Lane	Trax Plaza 2753 West 3600 West
Grand Vista Park 4534 South 6000 West	Utah Cultural Celebration Center Park 1355 West 3100 South
Hunter Ridge Park 4383 South 5710 West	West View Park 6050 West 4100 South
Hunter Village Park 6985 W. Hunter Valley Dr. (3215 South)	Wheatland Park 4266 South 3680 West
Hunter Village Trailhead Park 3410 S. Hunter View Dr	Willow Wood Park 3730 South 3375 West
Ironwood Park 4565 South Early Duke St. (5080 West)	Woodledge Park 5210 West 4310 South

<u>Trails Maintained by West Valley City</u>

- Hunter Village I Trail – 6750 West 3500 South
- Hunter Village II Trail – 3410 S. Hunter View Dr.
- Hunter Village IV Trail – 6830 West 3100 South
- Sugar Plum Farms I Trail – 7200 West 2940 South
- Sugar Plum Village II Trail – 3755 West 2900 South
- Mountain View Corridor Trail
- Cross Towne Trail
-

<u>Other Open Spaces</u>

- 6200 South Streetscape – 5881 West – 6441 West

- 2700 West 4100 South Intersection
- 3900 South Entrance Sign Area – 1176 West 3900 South
- 2200 South and Bangerter Entrance Sign
- Interstate 215 and 3500 South Exit – Northeast Quadrant
- 3500 South 2200 West Streetscape
- Hunter Village Phase 18 Frontage – 2700 S. Hunter Crest Dr.
- SR-201 and Redwood Road Interchange
- SR-201 and Bangerter Highway Interchange
- City Center Court Islands
-

<u>Storm Water Controls</u>

- Cottonwood Pond – 1200 West 3300 South
- Granger Elementary Basin – 2200 West 3700 South
- Holden Basin – 5120 West 4100 South
- Sugar Plum/Hunter Village Basin – 6950 West 2700 South
- Meadowland Basin – 5990 West 3000 South
- Metro Pond – 1400 West 2200 South
- Vistas Basin – 6000 West 4400 South
- Dalmatian Drive Desilting Structure
- Riter Structure
- Terrace Ridge Orifice Plate Outfall
- Back Nine Desilting Structure
- Lake Park Outfall
    - Desilting Structure - 4400 West 2900 South
    - Desilting Structure - 4500 West 2900 South

Pollutant Potential Assessment of City Owned Facilities

				Potential Pollutants			
City Owned or Operated Facilities	**Location**	**Department Responsible**	**Division Responsible**	**Trash**	**Parking Lot Runoff**	**Onsite Landscape Maintenance**	**Fueling**
City Hall – 3600 S. Constitution Blvd.		Public Works	Facilities	1	1	1	
Fire Station 71 – 4160 South 6400 West		Public Works	Facilities	1	1	1	
Fire Station 72 – 4100 South 4314 West		Public Works	Facilities	1	1	1	
Fire Station 73 – 2834 South 2700 West (including training facility)		Public Works	Facilities	1	1	1	
Fire Station 74 – 5545 West 3100 South		Public Works	Facilities	1	1	1	
Fire Station 75 – 3660 South 1950 West		Public Works	Facilities	1	1	1	
Fire Station 76 – 5372 Upper Ridge Road		Public Works	Facilities	1	1	1	
Public Safety/Justice Court Building – 3575 S. Market St.		Public Works	Facilities	1	1	1	
Harman Home – 4090 South 3600 West		Parks		1	1	1	
Utah Cultural Celebration Center – 1355 West 3100 South		Public Works/Pa	Facilities	1	1	1	
Family Fitness Center – 5415 West 3100 South				1	1	1	
Centennial Outdoor Pool - 5355 W 3100 South		Parks	Parks	1	1	1	
Animal Shelter/Housing Authority – 4522 West 3500 South		Parks	Parks	1	1	1	
Public Safety Storage Yard – 5900 West 5400 South				1	1	1	
USANA Amphitheatre Parking Lots – 5150 South 6055 West				1	1	1	
West Sub Station – 5300 West 3100 South				1	1	1	
West Valley City Courts – 3590 Constitution Blvd				1	1	1	
Parks Operations Facility – 6750 West Parkway Blvd				1	1	1	1
Public Works Operations Facility – 2805 South 3600 West		Public Works	Operations	1	1	1	1
Police Department Headquarters – 3577 South Market Street				1	1	1	
Fairbourne Station Parking Structure – 3500 South Market Street				1	1	1	
City Owned - Operated by Others							
The Maverik Center – 3200 S. Decker Lake Dr.				1	1	1	
Harman Hall– 3333 S. Decker Lake Dr.				1	1	1	
Golf Courses							
Stonebridge – 4415 Links Dr.		Parks	Golf	1	1	1	1
West Ridge – 5055 S. Westridge Blvd.		Parks	Golf	1	1	1	1
Back Nine Park	4105 West 3010 South	Parks		1	1	1	
Bridle Farms Park	6690 W. Hunter View Dr.	Parks		1	1	1	
Centennial Park	5405 West 3100 South	Parks		1	1	1	
City Park	4500 West 3500 South	Parks		1	1	1	
Country Meadows Park	4175 West 3980 South	Parks		1	1	1	
Fairbourne Station Promenade Park	2905 W Lehman Ave.	Parks		1	1	1	
Falcon Crest Park	4055 South 7060 West	Parks		1	1	1	
Fassio Farm Park	3720 South 5200 West	Parks		1	1	1	
Fox Tail Park	6880 W. Terrace Ridge Dr. (3045 South)	Parks		1	1	1	
Glenn Weaver Memorial	6380 Cape Ridge Lane	Parks		1	1	1	
Grand Vista Park	4534 South 6000 West	Parks		1	1	1	
Hunter Ridge Park	4383 South 5710 West	Parks		1	1	1	
Hunter Village Park	6985 W. Hunter Valley Dr. (3215 South)	Parks		1	1	1	
Hunter Village Trailhead Park	3410 S. Hunter View Dr	Parks		1	1	1	
Ironwood Park	4565 South Early Duke St. (5080 West)	Parks		1	1	1	
Kings Pointe Park	1330 West Rothchild Dr. (3665 South)	Parks		1	1	1	
Maple Meadows Park	2520 West 3380 South	Parks		1	1	1	
Meadow Lands Park	3350 South 5800 West	Parks		1	1	1	
Parkway Park	3405 West Parkway Blvd. (2700 South)	Parks		1	1	1	
Peachwood Park	3510 West 3965 South	Parks		1	1	1	
Scottsdale Park	3755 West 3100 South	Parks		1	1	1	
Sugar Plum Park	3755 West 2900 South	Parks		1	1	1	
Terrace Ridge Park	6260 W. Terrace Ridge Dr. (4365 South)	Parks		1	1	1	
Trailblazer Park	3164 S. Trailblazer Cove (6675 South)	Parks		1	1	1	
Trax Plaza	2753 West 3600 West	Parks		1	1	1	
Utah Cultural Celebration Center Park	1355 West 3100 South	Parks		1	1	1	
West View Park	6050 West 4100 South	Parks		1	1	1	

Wheatland Park	4266 South 3680 West	Parks		1	1	1	
Willow Wood Park	3730 South 3375 West	Parks		1	1	1	
Woodledge Park	5210 West 4310 South	Parks		1	1	1	
Trails							
Hunter Village I Trail – 6750 West 3500 South		Parks		1		1	
Hunter Village II Trail – 3410 S. Hunter View Dr.		Parks		1		1	
Hunter Village IV Trail – 6830 West 3100 South		Parks		1		1	
Sugar Plum Farms I Trail – 7200 West 2940 South		Parks		1		1	
Sugar Plum Village II Trail – 3755 West 2900 South		Parks		1		1	
Mountain View Corridor Trail		Parks		1		1	
Cross Towne Trail		Parks		1		1	
Open Space							
6200 South Streetscape – 5881 West – 6441 West		Parks		1		1	
2700 West 4100 South Intersection		Parks		1		1	
3900 South Entrance Sign Area – 1176 West 3900 South		Parks		1		1	
2200 South and Bangerter Entrance Sign		Parks		1		1	
Interstate 215 and 3500 South Exit – Northeast Quadrant		Parks		1		1	
3500 South 2200 West Streetscape		Parks		1		1	
Hunter Village Phase 18 Frontage – 2700 S. Hunter Crest Dr.		Parks		1		1	
SR-201 and Redwood Road Interchange		Parks		1		1	
SR-201 and Bangerter Highway Interchange		Parks		1		1	
City Center Court Islands		Parks		1		1	
Storm Water Controls							
Cottonwood Pond – 1200 West 3300 South				1			
Granger Elementary Basin – 2200 West 3700 South				1			
Holder Drive Basin – 5120 West 4100 South				1		1	
Sugar Plum/Hunter Village Basin – 6950 West 2700 South				1		1	
Meadowland Basin – 5990 West 3000 South				1		1	
Metro Pond – 1400 West 2200 South				1		1	
Vistas Basin – 6000 West 4400 South				1		1	
Dalmatian Drive Desilting Structure				1		1	
Riter Structure and Riter Detention Basin				1		1	
Terrace Ridge Orifice Plate Outfall				1			
Back Nine Desilting Structure				1		1	
Lake Park Outfall				1			
Desilting Structure - 4400 West 2900 South				1			
Desilting Structure - 4500 West 2900 South				1			

Paint	Herbicides/ Pesticides Storage	Landscape Equipment Maintenance	Petroleum Products	Vehicle Fluids	Salt Storage	Sediment	Municipal SW Operations	Fire Fighting Training Activites	Stormwater Detention Park	Total Score	Distance to Sensitive Waters
										3	
										3	
										3	
						1		1		5	**0.5-1.0 miles**
										3	
										3	
										3	
										3	
										3	
										3	***0-0.25 miles***
										3	
										3	
1										4	
										3	
										3	
										3	
										3	
1	1	1	1	1		1	1	1		12	***0-0.25 miles***
1	1	1	1	1	1	1	1	1		13	2+ miles
										3	
										3	
										3	
										3	
1	1	1	1	1		1				10	***0-0.25 miles***
1	1	1	1	1		1			1	11	2+ miles
										3	
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Retrofit Plan 2020-2025

City Owned Facilities																			
Description	Land Use		Proximity to Waterbody		Status of Waterbody		Hydrologic condition of receiving waterbody		Proximity to sensitive ecosystem		Total 16-19 High, 12-15 M-H, 9-11 Med, 5-8 L-M, 0-5 Low	Potential Risk Ranking	Best-suited control measure	Other potential control measures	Other planned improvements	Schedule of Planned Improvements		Grand Total	Ranking
Public Works Maintenance Yard	Industrial	9	1-2 miles	2	Impaired (DL)	3	Open water, year round	3	1-2 miles		17	High	Covered Storage	Secondary Containment	New Construction	2020	5	22	1
New Parks Maintenance Yard	Industrial	9	1-2 miles	2	Impaired (DL)	3	Open water, year round	3	1-2 miles		17	High	Covered Storage	Secondary Containment	New Construction	2020	3	20	2
Maverik Center	Commercial	4	< .5 miles	3	Impaired (DL)	3	Open water, year round	3	< .5 miles		13	Med-High	Oil-Water Separators	Parking Lot LID	Parking Lot Resurfacing	2022-23	3	16	3
Cultural Celebration Center	Commercial	3	< .5 miles	3	Impaired (JR)	3	Open water, year round	3	< .5 miles		12	Med-High	Oil-Water Separators	Parking Lot LID	None	2024-25	1	13	4
City Hall	Office	1	1-2 miles	2	Impaired (DL)	3	Open water, year round	3	1-2 miles		9	Medium	Oil-Water Separators	Parking Lot LID	Interior Remodel	2025+	3	12	5
Fire Station 75	Light Industrial	2	1-2 miles	2	Impaired (DL)	3	Open water, year round	3	1-2 miles		10	Medium	Oil-Water Separators	Parking Lot LID	Roof repairs	2025+	1	11	6

DL = Decker Lake
JR = Jordan River

SAFETY DATA SHEET SDS: TAGINATOR®

Section 1—Identification

Product Identifier: TAGINATOR®

Product Use: Graffiti Remover Liquid for Masonry Surfaces.

Manufacturer's Name: Equipment Trade Service Co. Inc.

Address: 20 East Winona Avenue Norwood, PA 19074 USA

24 Hour Emergency Telephone: ChemTel 800-255-3924
General Telephone: 1-610-583-7657 8 AM— 4 PM EST. M—F
Website: www.etscompany.com

Section 2—Hazard's Identification

Classifications: Skin Corrosion Category 1B, Eye Damage Category 1, Acute Toxicity—Oral Category 4, Flammable Liquid Category 3 (Although will not sustain flame, See notes sections 5 & 9)
Symbols: Corrosion, Flame **Signal Word:** Danger
Hazard Statement: Causes severe skin burns and eye damage. Harmful if swallowed.
Flammable liquid and vapor (Although will not sustain flame, See notes sections 5 & 9)
Precautionary Statements:
Prevention: Wash hands and skin thoroughly after handling. Wear eye and face protection. Wear Protective liquid proof gloves and clothing. Do not eat, drink or smoke when using this product. Do not breathe mist or spray. Keep only in original plastic container. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Use explosion proof electrical/ventilating/lighting/equipment/ Use only non sparking tools. Take precautionary measures against static discharge.
Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If swallowed: Rinse mouth. Do not induce vomiting. Immediately call a poison center / doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower. Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Storage: Store locked up.
Disposal: Dispose of contents / container in accordance with local, state, federal and international regulations.
Environmental: Biodegradable

NFPA Rating:
0=Safe, 4=Danger; Health (Blue) 2 Flame (Red) 1 React (Yellow) 0 Special (White) Alk

Section 3—Composition / Information on Ingredients

Component	CAS#	% By Weight
Propylene glycol methyl ether acetate	108-65-6	1—5
Potassium Hydroxide	1310-58-3	5—10

In compliance with OSHA HCS and UN GHS, Trade Secret / Confidential business information has been omitted.

Section 4—First Aid Measures

Inhalation: Unusual Exposure to mist will irritate respiratory system. Move Person to fresh air and keep comfortable.
Eyes: Contact will cause burns. Continually flush with water. Remove contact lenses if present and easy to do and seek medical attention.
Skin: Contact will cause skin irritation or burning. Remove contaminated clothing, flush skin with water for 15 minutes. Wash contaminated clothing before reuse.
Ingestion: Swallowing will cause burning to mouth, throat and digestive system. Corrosive if swallowed, wash mouth, seek immediate medical attention. Call poison Control. Do not induce vomiting unless directed to do so by medical personnel.

Always seek medical attention if complications develop.

Section 5—Fire Fighting Measures

Note: Product will not sustain combustion, burning or flame per ASTM D4206
Suitable Extinguishing Media: C02, Dry Chemical, Foam, Water Spray
Unsuitable Extinguishing Media: None Known
Unusual Fire & Explosion Hazards: May produce toxic fumes of carbon monoxide if burning. Empty containers may contain residue. Do not pressurize, cut, heat, or expose containers to flame.
Special Protection & Procedures: Cool fire-exposed containers. Do not enter confined fire space without proper protective equipment including NIOSH approved self-contained breathing apparatus.

Section 6—Accidental Release Measures

Personal Precautions: Keep unnecessary people away; isolate area and deny entry. Stay upwind. Do not eat, drink or smoke while cleaning up.
(Also see section 8).

Protective Equipment: EYES: Chemical Safety goggles and or face shield **SKIN:** Gloves, Nitrile or PVC, waterproof boots, waterproof clothing. Keep personal water rinse near by **RESPIRATORY:** Chemical mist respirator in poorly ventilated areas.

Emergency Procedures: Use appropriate safety equipment. Eliminate sources of ignition. Collect and contain all spill with absorbent material for disposal. Cover drains. Contain large spills and pump into suitable tank for disposal.

Waste Disposal methods: Obey all local, state and federal regulations.

Section 7—Handling and Storage

Precautions & Conditions for Safe Handling: Do not get in eyes, on skin or on clothing. Keep container closed when not in use. Do not mix with other chemicals. Avoid breathing mist. No eating, drinking or smoking. Wash hands after use. Store in a well ventilated place. Keep cool. Do not store near open flame or heat. Do not store near incompatible materials. Do not take internally. Transfer material only to approved, properly labeled containers. KEEP OUT OF REACH OF CHILDREN.

Incompatible Materials: Strong acids, alkalies and oxidizers.

Section 8— Exposure Controls/ Personal Protection

Exposure Limits	OSHA PEL	ACGIH TLV	Other
Propylene glycol methyl ether acetate	Not Available	Not Available	Not Known
Potassium Hydroxide	Not Listed	2 mg/ m3	Not Known

Ventilation: Local & mechanical recommended
Personal protective equipment (PPE): EYES: Chemical Safety goggles and or face shield **SKIN:** Gloves, Nitrile or PVC, waterproof boots, waterproof clothing. Keep personal water rinse near by **RESPIRATORY:** Chemical mist respirator in poorly ventilated areas.

SDS: TAGINATOR®

Section 9—Physical and Chemical Properties

Appearance / Color: Liquid, Reddish Brown
Odor: Fresh and clean scented
pH: High Alkaline & Solvent blend
Melting Point: Does Not Apply
Freezing Point: Less than –10Degrees F.
Boiling Point: Not Available
Flash Point: 112.1 Degrees F. Small Scale closed cup ASTM D3278. **Note:** Product will not sustain combustion, burning or flame per ASTM D4206, therefore ships not flammable.
Evaporation Rate: Not Available
Lower Flammable Limit: Not Available
Upper Flammable Limit: Not Available
Vapor Pressure: Not Available
Vapor Density: Not Available
Relative Density / Specific Gravity: 1.088 gm/ml
Solubility(ies): Complete in water
Partition Coefficient: n-octanol/water: Not Available
Auto-ignition Temperature: Not Available
Decomposition Temperature: Not Available
Viscosity: Thin Liquid
V.O.C Content: Less than 30% (by weight)

Section 10—Stability and Reactivity

Reactivity: Not available / none known
Chemical Stability: No decomposition, if handled and stored according to specifications.

Possibility of hazardous reactions: Avoid incompatible materials.

Conditions to avoid: Heat, sparks, flame.

Materials to avoid: Strong acids, oxidizers, Aluminum and other alloys.

Hazardous decomposition products: May produce toxic fumes of carbon monoxide if burning. Empty containers may contain residue. Do not pressurize, cut, heat, or expose containers to flame.

Section 11—Toxicological Information

Signs and symptoms of overexposure:

Acute Effects:
Inhalation: Exposure to mist will irritate or burn respiratory system.
Eyes: Contact will cause burns.
Skin: Contact will cause skin irritation or burning.
Ingestion: Swallowing will cause burning to mouth, throat and digestive system.
Target Organ Effects: None are known
Chronic Effects: None are known
Carcinogenicity: None are known
Germ Cell Mutagenicity: None are known
Reproductive Toxicity: None are known

Medical Conditions Aggravated by Exposure: None are known

Section 12—Ecological Information

Persistence and degradability: All components contained in the product are classified as "readily biodegradable". This product is expected to be inherently biodegradable.

Bio-accumulative potential: There is no evidence to suggest bioaccumulation will occur.

Section 13—Disposal Considerations

Obey all local, state, federal and international regulations.

Section 14—Transportation Information

U.S. Department of Transportation (DOT)

UN/NA Number: UN1760
Proper Shipping Name: UN1760, Corrosive Liquid, N.O.S., (potassium Hydroxide), 8, PGII
Hazard Class: 8 (Corrosive)
Packing Group: II
Labels Required: Corrosive

U.S. / Canada Emergency Response Guide #: 154

International Maritime Organizations (IMDG)

UN/NA Number: UN1760
Proper Shipping Name: UN1760, Corrosive Liquid, N.O.S., (potassium Hydroxide), 8, PGII
Hazard Class: 8 (Corrosive)
Packing Group: II
Labels Required: Corrosive

Section 15—Regulatory Information

[WHMIS Classification]:

[OSHA]:

[SERA]:

[TSCA]:

Section 16— Other Information

Date SDS Prepared: May 1st 2015 **Revised:** May 1st 2018
The information in this SDS was obtained from sourced which we believe to be reliable. However, the information is provided without any warranty, expressed or implied. We do not assume responsibility and expressly disclaim liability for loss, damage or expense rising out of, or in any way connected with the handling, storage, use or disposal of the product. This SDS may not be applicable if the product is used as a component of another product.

Prepared in accordance with the OSHA Hazard Communication Standard (HCS) to conform with the United Nations (UN) Globally Harmonized System of Classification and Labeling of Chemical (GHS)

High Priority Grates (cleaned on rainy days)

6950 West Parkway BLVD. ((Hunter Village Basin)-2grates
1200 West Beaver Pond (3300 S)
3000 South 5990 West (Meadowlands Basin)-2 grates
Back Nine 4000 West Wendy Ave. (2920 South) (Lake Park)
4400 West 2900 South (Lake Park)
4500 West 2900 South (Lake Park)
7080 West Dalmatian Drive (3045 south)
Metro Park (2200 S 1300 W) -2 grates
3394 South Timeron Drive (5980 West) in field
6800 West 3500 South
6600 West 2550 South

Hydrodynamic Separators (cleaned annually)

Market Street 3500 South
3800 West south frontage road

Siphons (cleaned annually)

4100 south 4000 west
3500 South 5200 West
3100 South 4400 West

Pet Waste Signs in West Valley City Parks

Centennial Park

One sign on east side of west softball quad (Pet Waste Station)

One sign on south east of east softball quad (Pet Waste Station)

Promenade Park

One sign on west side of park on sidewalk on the south side of Lehman Ave

One sign on east side of park on sidewalk on the south side of Lehman Ave

One sign on south side of park, just west of scale

EXHIBIT A

West Valley City Parks & Recreation, Park Maintenance
2729 S 6750 W
West Valley City, Utah 84128

Parcel #14-27-203-017-000

EXHIBIT B

STORMWATER POLLUTION PREVENTION PLAN

for:

West Valley City Parks & Recreation, Park Maintenance
2729 S 6750 W
West Valley City, Utah 84128

Parcel #14-27-203-017-000

PURPOSE AND RESPONSIBILTY

As required by the Clean Water Act and resultant local regulations, including West Valley City Municipal Separate Storm Sewer Systems (MS4) Permit, those who develop land are required to build and maintain systems to minimize litter and contaminants in stormwater runoff that pollute waters of the State.

This Stormwater Pollution Prevention Plan (SWPPP) describes the systems, operations and the minimum standard operating procedures (SOPs) necessary to manage pollutants originating from or generated on this property. Any activities or site operations at this property that contaminate water entering the City's stormwater system and generate loose litter must be prohibited, unless SOPs are written to manage those activities or operations and amended into this SWPPP.

The Riter Canal is impaired but does not have a TMDL. The SWPPP is aimed at addressing these impairments in addition to all other pollutants that can be generated by this property.

CONTENTS

SECTION 1: SITE DESCRIPTION, USE AND IMPACT
SECTION 2: TRAINING
SECTION 3: RECORDKEEPING
SECTION 4 APPENDICES

SECTION 1: SITE DESCRIPTION, USE AND IMPACT

The site infrastructure at our site is limited at controlling and containing pollutants and our operations if managed improperly can contaminate the environment. This SWPPP includes standard operations procedures (SOP)s that are intended to compensate for the pollution containment limitations of our site infrastructure and direct our maintenance operations to responsibly manage our grounds.

Parking, Sidewalk and flatwork

Any sediment, leaves, debris, spilt fluids or other waste that collects on our parking lots and sidewalks will be swept up and deposited in our solid waste/sweeping containment bin, anything that isn't swept up will be carried by runoff to our storm drain inlets. This waste material will settle in our storm drain system increasing maintenance cost and solid and dissolved waste in our runoff is contained in our system which includes a series of sediment catch boxes, COB/OW and a Detention Basin before entering the adjoining wetlands. If they get past our onsite containment, they can ultimately make it to the Riter Canal. Maintenance involves regular sweeping of our pavements and cleaning of our storm drain system when necessary. See Pavement Maintenance Operations SOP

Landscaping

Our landscape operations can result in grass clippings, sticks, branches, dirt, mulch, fertilizers, pesticides and other pollutants to fall or be left on our paved areas. This waste material will settle in our storm drain system increasing maintenance cost and solid and dissolved waste in our runoff can pass through our storm drain system ultimately polluting Riter Canal. The primary pollutant impairing the Riter Canal is organic material, so it is vital that our paved areas with direct connection to the City storm drain systems remain clean of landscape debris. Refer to Landscape Maintenance Operations SOPs.

Storm Drain System

The storm drain catch basins with higher risk of contaminates direct all runoff to a COB/OWS and detention basin in the NW corner of the property. This stormwater treatment unit that is designed to allow sediment to settle and allow water to flow through the ground and out through an outfall to the north end of the pond. This device is able to be bypassed during large storm events and the dissolved pollutants will pass through and harm the Riter Canal. Also, our stormwater treatment system has the potential to hold water at times which could provide an environment for mosquitos to breed. It is important to regularly maintain this system to protect the Riter Canal and prevent mosquito breeding. Use our Storm Drain Maintenance Operations SOP to manage our storm drain system responsibly.

Waste Management

There is a 30 yard open top dumpster that is used for large items. Debris is to be kept under the top rim of the dumpster to prevent any risk of debris being blown out due to

wind. Good waste management systems, if managed improperly, can become the source of the very pollution that they were intended to control. Use our Waste Management Operations SOP to control and manage the solid waste we generate.

Utility System

Our roof top and ground level utility system are exposed to our roof drains and parking lot drain boxes which drain to our pavements. These heating and air conditioner units contains oils and other chemicals that can harm the Riter Canal if allowed to drain off our property. Liquids and other waste generated by maintenance of this system can be appropriately managed by our Spill Response and Control SOP.

Snow and Ice Removal Management

Salt is a necessary pollutant and is vital to ensuring a safe parking and pedestrian walkways. However, the snow removal operations if improperly managed will increase our salt impact to our own vegetation and local water resources. All Ice Melt products are to be stored inside preventing any pollution caused by wind, rain and snow. Use our Snow and Ice Removal Management SOP to minimize our salt impact.

Vehicle and Equipment Storage

Equipment storage if not properly managed has the potential of allowing runoff to pollute the stormwater system and allow harmful contaminants to enter the Riter Canal. Debris and runoff from our equipment and storage areas are managed by our Equipment and Storage SOP.

SECTION 2: TRAINING

Ensure that all employees and maintenance contractors know and understand the SOPs specifically written to manage and maintain the property. Maintenance contractors must use the stronger of their Company and the SWPPP SOPs. Training is to be done annually and at the time of hire. Training summary and attendance log to be kept in the SWPPP binder and forwarded to the Storm Water Maintenance Supervisor.

SECTION 3: RECORDKEEPING

Maintain records of operation and maintenance activities in accordance with SOPs. Inspection records will be kept on Cityworks database.

SECTION 4: APPENDICES

Appendix A- Site Drawings and Details
Appendix B- SOPs
Appendix C- Recordkeeping Documents
Appendix D- Supporting Documents

APPENDIX A – SITE DRAWINGS AND DETAILS

Properties Maintained by West Valley City – Park Maintenance Division
Park Maintenance Division - Contact List
Park Maintenance Facility Site Map
Map of nearby Riter Canal and Wetlands
Grading Plan
Site Plan
Utility Plan
Floor Drains in Parks Facilities
Pet Waste Signs in West Valley City Parks
Drawing – Floor Drains and Pet Stations at Centennial Park
Drawing – Floor Drains at City Park
Drawing – Floor Drains at Parkway Park
Drawing – Floor Drains at West View Park
Drawing – Floor Drains at Fairbourne Station Promenade Park

Properties Maintained by West Valley City – Park Maintenance Division

Park Maintenance Facility - 2729 S 6750 W

City Parks
Back Nine Park - 4105 West 3010 South
Bridle Farms Park - 6690 W. Hunter View Dr.
Centennial Park - 5405 West 3100 South
City Park - 4500 West 3500 South
Country Meadows Park - 4175 West 3980 South
Diamond Summit Trailhead Park– 6482 Mount Adams Dr.
Fairbourne Station Promenade Park - 2905 W Lehman Ave.
Falcon Crest Park - 4055 South 7060 West
Fassio Farm Park - 3720 South 5200 West
Fox Tail Park - 6880 W. Terrace Ridge Dr. (3045 South)
Hunter Ridge Park - 4383 South 5710 West
Hunter Village Park - 6985 W. Hunter Valley Dr. (3215 South)
Hunter Village Trailhead Park - 3410 S. Hunter View Dr.
Grand Vistas Park – 4534 S 600 W
Greater Southridge Trailhead Park – 5706 S Woodview Dr.
Ironwood Park - 4565 South Early Duke St. (5080 West)
Kings Pointe Park - 1330 West Rothchild Dr. (3665 South)
Maple Meadows Park - 2520 West 3380 South
Meadow Lands Park - 3350 South 5800 West
Parkway Park - 3405 West Parkway Blvd. (2700 South)
Peachwood Park - 3510 West 3965 South
Scottsdale Park - 3755 West 3100 South
Sugar Plum Park - 3755 West 2900 South
Terrace Ridge Park - 6260 W. Terrace Ridge Dr. (4365 South)
Trailblazer Park - 3164 S. Trailblazer Cove (6675 South)
Trax Plaza - 2753 West 3600 South
West View Park - 6050 West 4100 South
Wheatland Park - 4266 South 3680 West
Woodledge Park - 5210 West 4310 South

Trails Maintained by West Valley City
Hunter Village I Trail – 6750 West 3500 South
Hunter Village II Trail – 3410 S. Hunter View Dr.
Hunter Village IV Trail – 6830 West 3100 South
Mountain View Corridor Trail – 4100 S to 7000 S
Sugar Plum Farms I Trail – 7200 West 2940 South
Sugar Plum Village II Trail – 3755 West 2900 South

Other Open Spaces
6200 South Streetscape – 5881 West – 6441 West
3900 South Entrance Sign Area – 1176 West 3900 South
2200 South and Bangerter Entrance Sign
Interstate 215 and 3500 South Exit – Northeast Quadrant
3500 South 2200 West Streetscape
Hunter Village Phase 18 Frontage – 2700 S. Hunter Crest Dr.
SR-201 and Redwood Road Interchange
SR-201 and Bangerter Highway Interchange
City Center Court Islands

Contact List

West Valley City Parks and Recreation
5415 W 3100 S
West Valley City, Utah 84120

Park Director
Nancy Day (801) 955-4009

Assistant Director
Jason Erekson (801) 955-4006

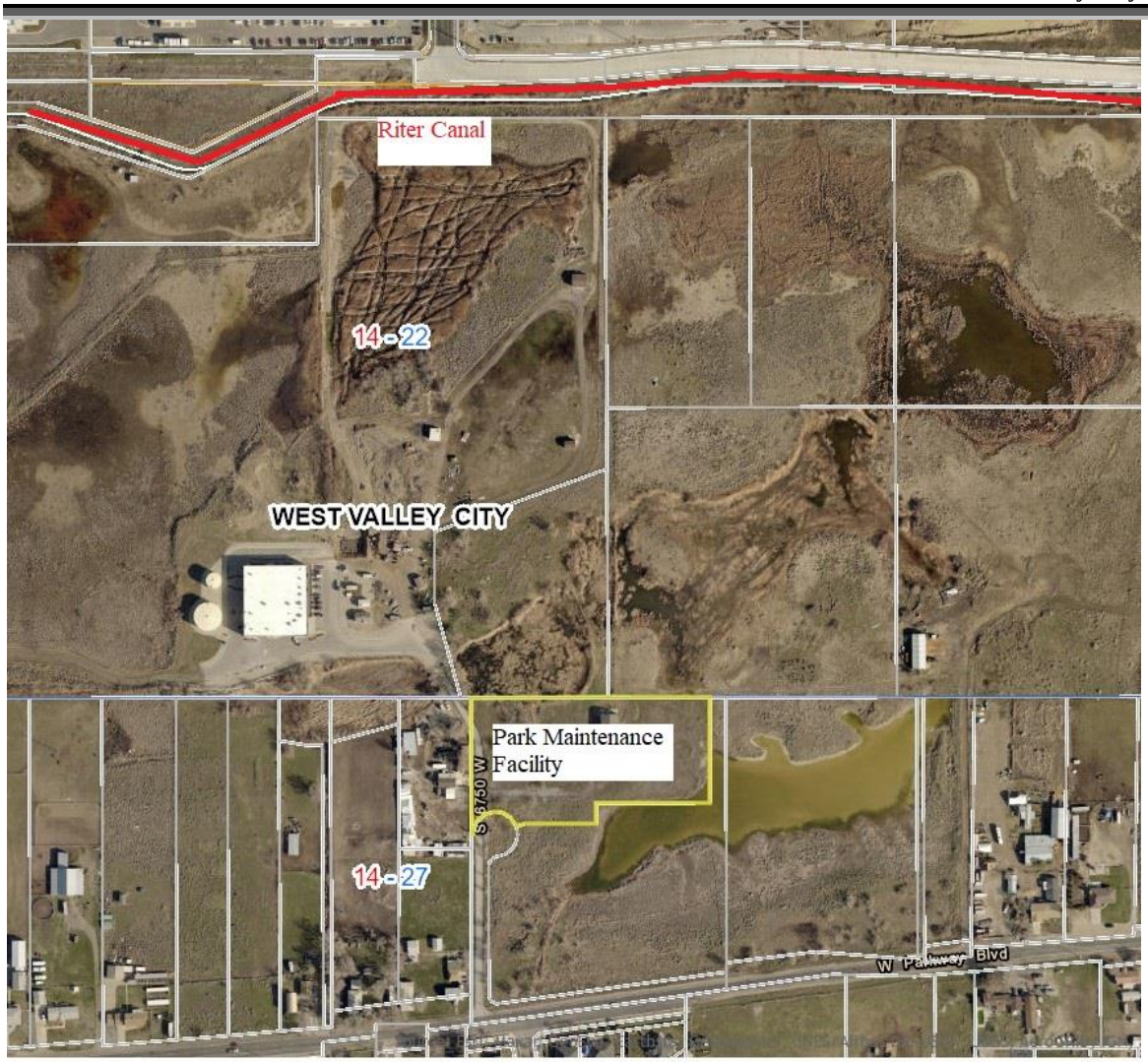
West Valley City Parks Maintenance Department
2729 S 6750 W
West Valley City, Utah 84128

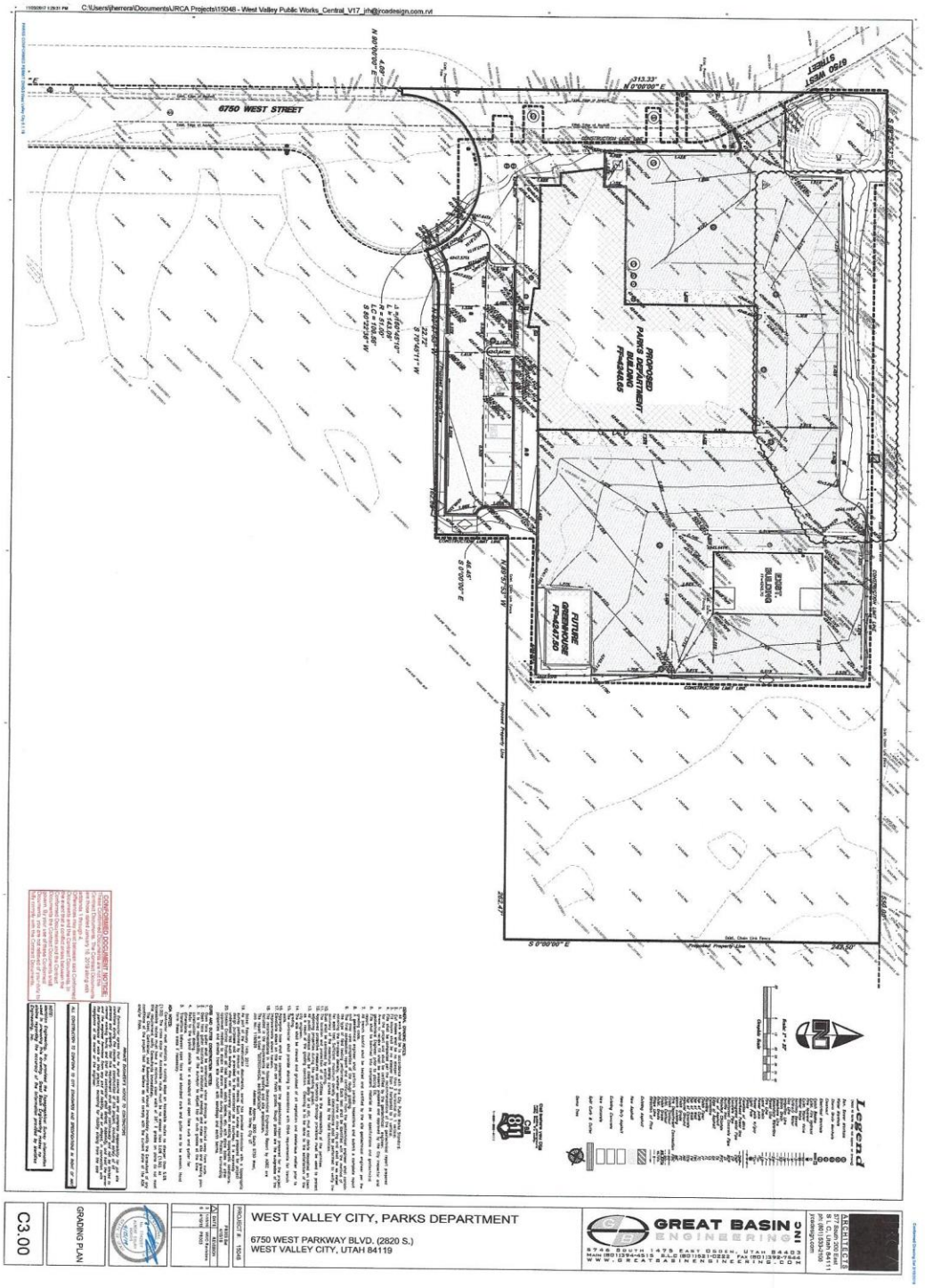
Parks Superintendent
Kent Jensen (801) 509-1934

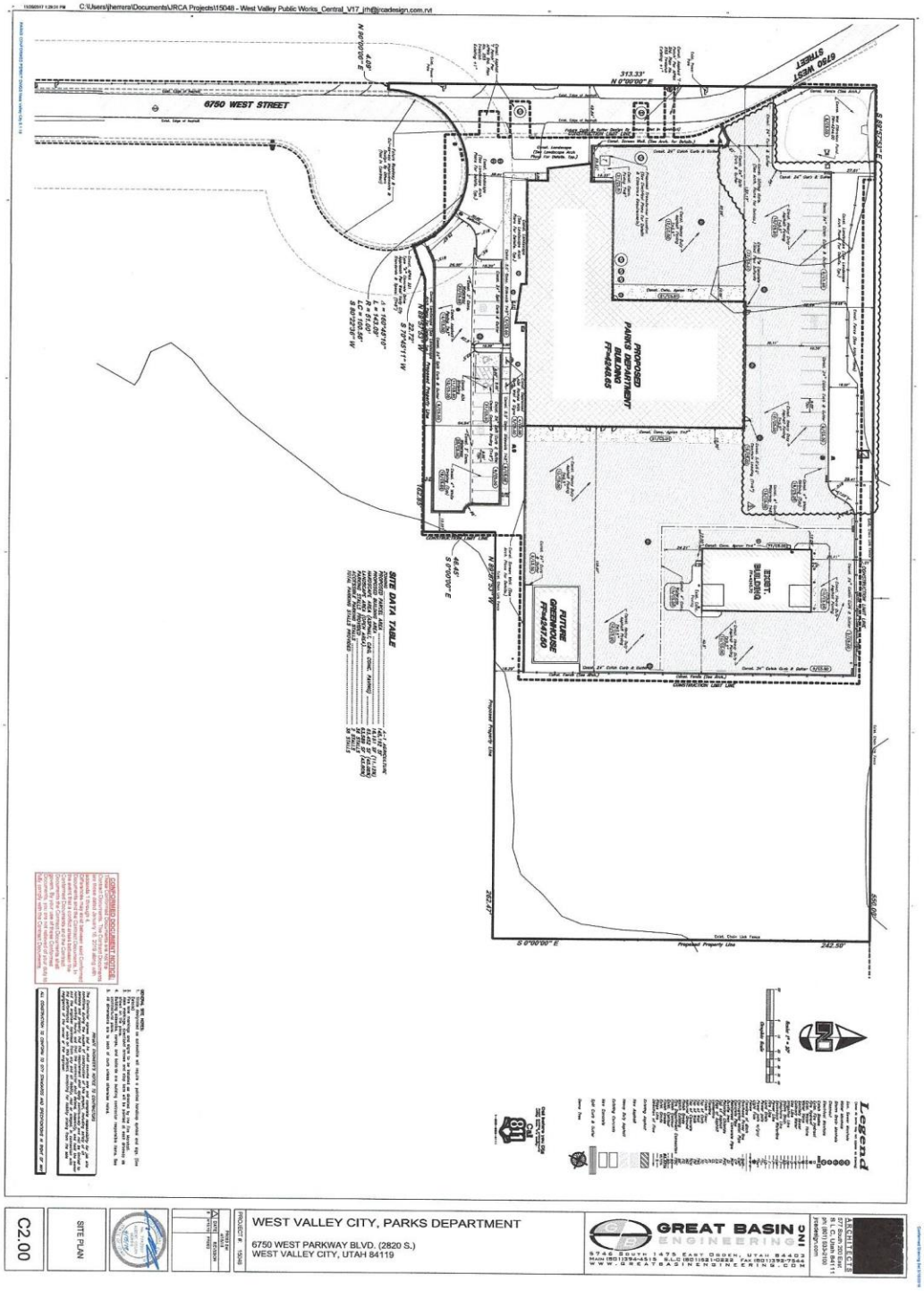
Facilities Supervisor
Lynn Erickson (801) 509-1937

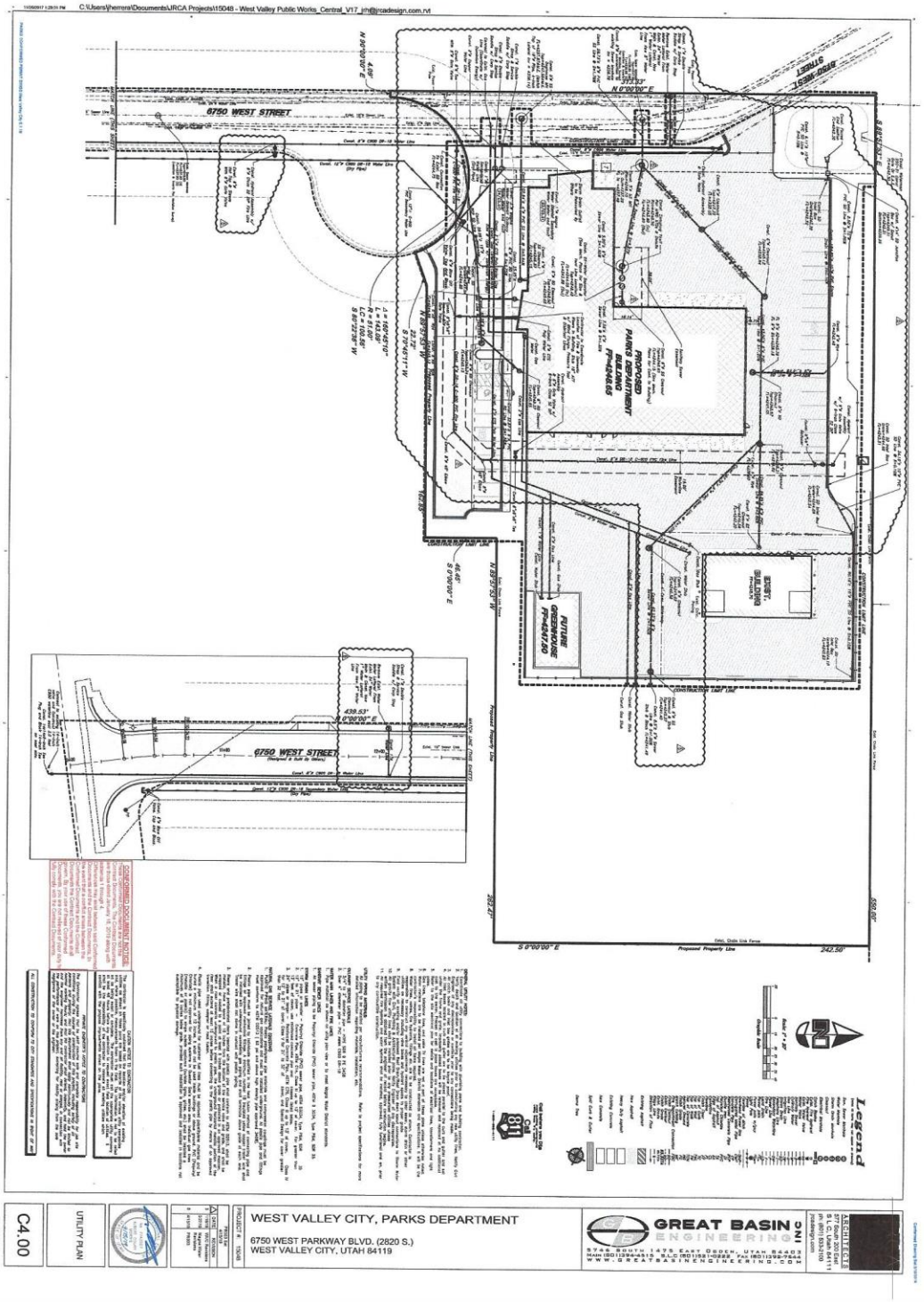
Irrigation Supervisor
Dustin Bushnell (801) 509-1933

Outflow to Riter Canal & Wetlands
Detention Basin
Inlets
COB OWS
Catch Basin
Catch Basin
Offices
Vehicle Maintenance and Cleaning Inside Building
Catch Basin
Inlet Box
Catch Basin
Storm Water Flow
Equipment Storage Building
Chemical Storage Inside
Paint Storage Inside
Storm Water Flow
Catch Basin
Equipment and Material Storage Inside
Gas Storage Inside
30 Yd Dumpster
Catch Basin
Property Boundary


Riter Canal
14 - 22
WEST VALLEY CITY
Park Maintenance Facility
S 3750 W
14 - 27
W Parkway Blvd


6750 WEST STREET
6750 WEST STREET
PROPOSED PARKS DEPARTMENT BUILDING FF=4436.65
FUTURE BUILDING FF=4437.00
EXISTING BUILDING
CONCRETE TILT UP
Legend
CONSTRUCTION DOCUMENT NOTICE
WEST VALLEY CITY, PARKS DEPARTMENT
6750 WEST PARKWAY BLVD. (2820 S.)
WEST VALLEY CITY, UTAH 84119
GREAT BASIN ENGINEERING
GRADING PLAN
C3.00


6750 WEST STREET
6790 WEST STREET
PROPOSED PARKS DEPARTMENT BUILDING FF=4246.65
FUTURE GREENHOUSE FF=4241.50
EXIST. BUILDING
SITE DATA TABLE
Legend
WEST VALLEY CITY, PARKS DEPARTMENT
6750 WEST PARKWAY BLVD. (2820 S.)
WEST VALLEY CITY, UTAH 84119
GREAT BASIN ENGINEERING
SITE PLAN
C2.00


6750 WEST STREET
PROPOSED PARKS DEPARTMENT BUILDING FA-04-05
FUTURE GREENHOUSE FA-04-07-00
FUTURE BUILDING
Legend
WEST VALLEY CITY, PARKS DEPARTMENT
6750 WEST PARKWAY BLVD. (2820 S.)
WEST VALLEY CITY, UTAH 84119
GREAT BASIN ENGINEERING
UTILITY PLAN
C4.00

Floor Drains in Parks Facilities

Centennial Park

West Softball Quad

One in storage room

Three in snack bar

One in each restroom stall

West Pavilion

One in each storage room

One in handicapped restroom

Channel drain in front of each restroom stall

East Pavilion

Channel drain in front of each restroom stall

East Softball Quad

One in storage room

Three in snack bar

One in each restroom stall

City Park

One in men's restroom

One in women's restroom

One in storage room

Parkway Park

One in each restroom stall

One in storage room

West View Park

One in handicapped restroom

One under hand washing station

One in storage room

Fairbourne Station Promenade Park

Four drains in the restroom complex

Pet Waste Signs in West Valley City Parks

Centennial Park

One sign on east side of west softball quad (Pet Waste Station)

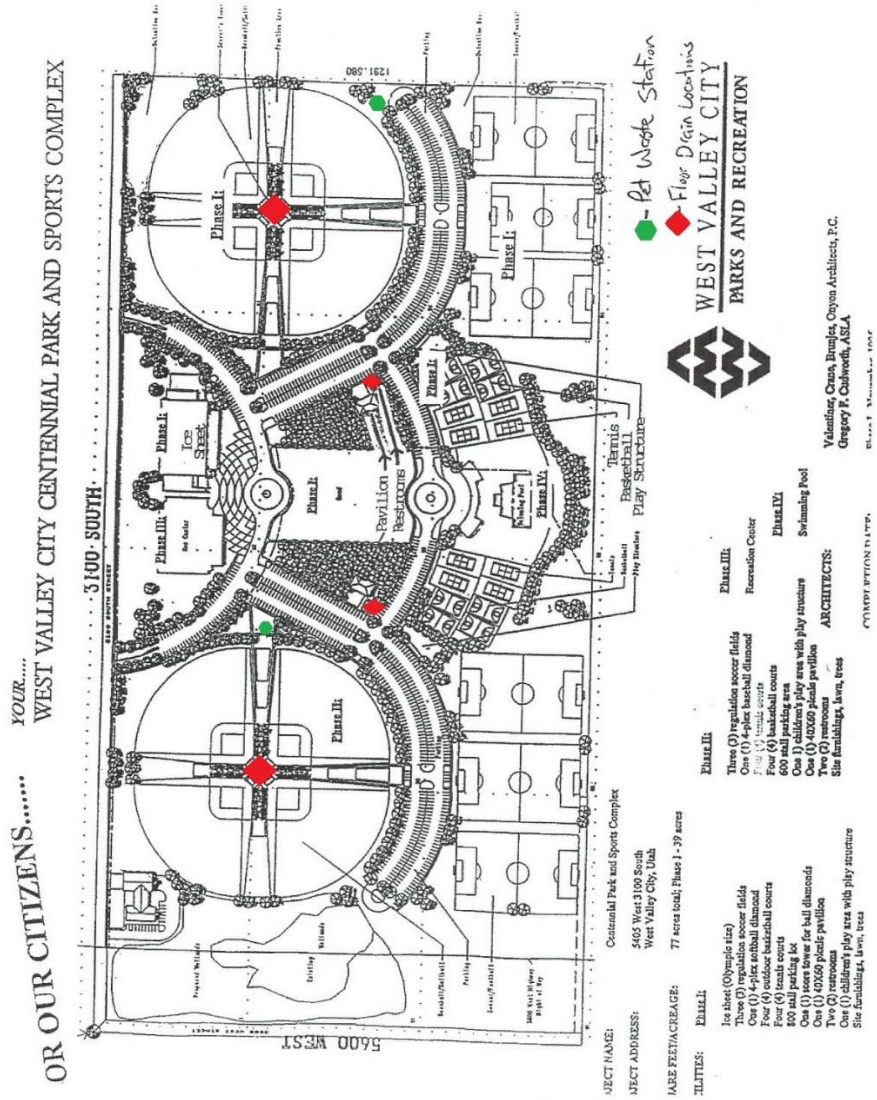
One sign on south east of east softball quad (Pet Waste Station)

Promenade Park

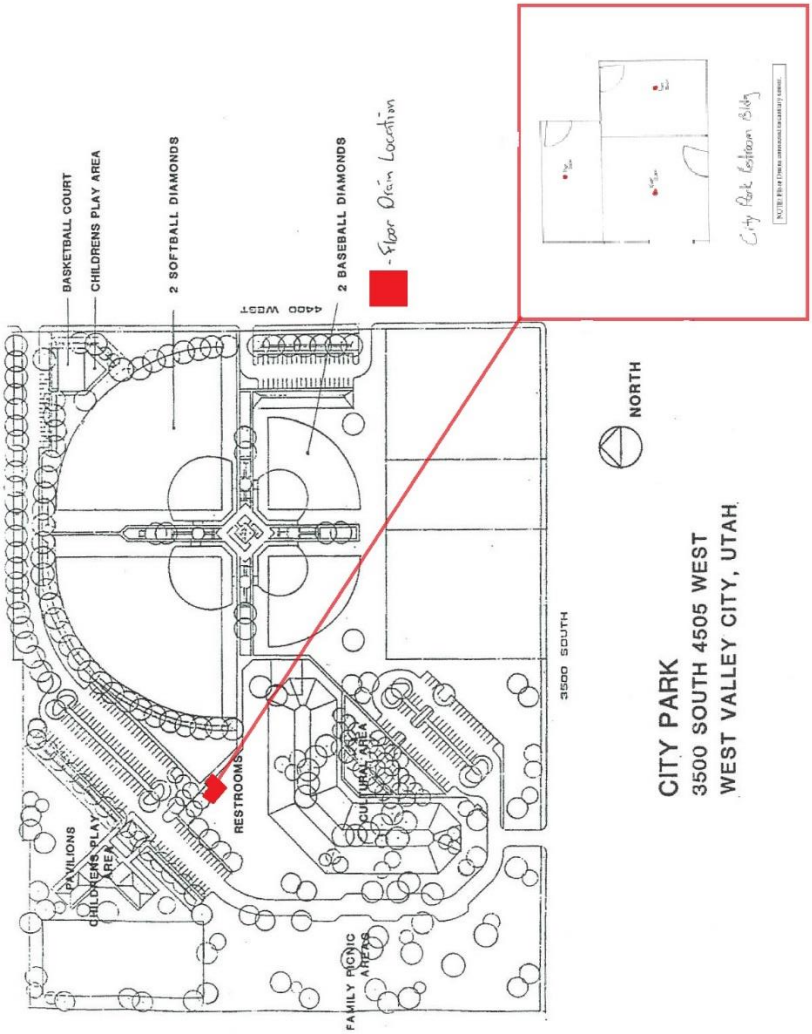
One sign on west side of park on sidewalk on the south side of Lehman Ave

One sign on east side of park on sidewalk on the south side of Lehman Ave

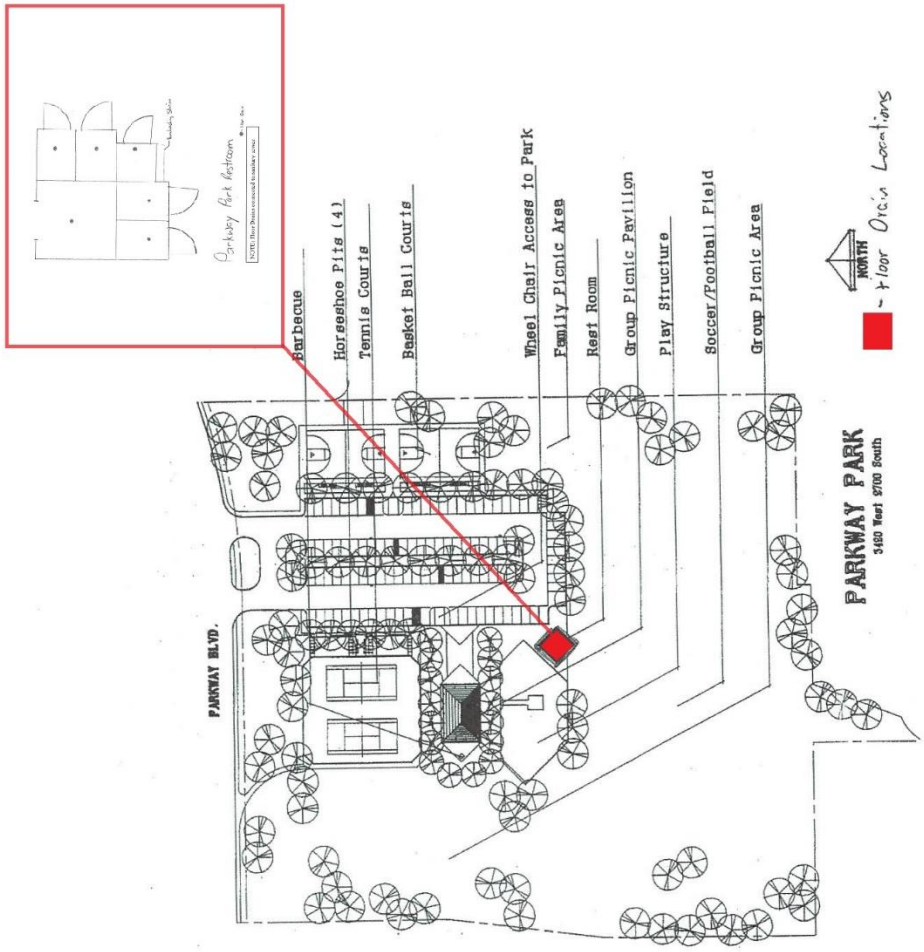
One sign on south side of park, just west of scale



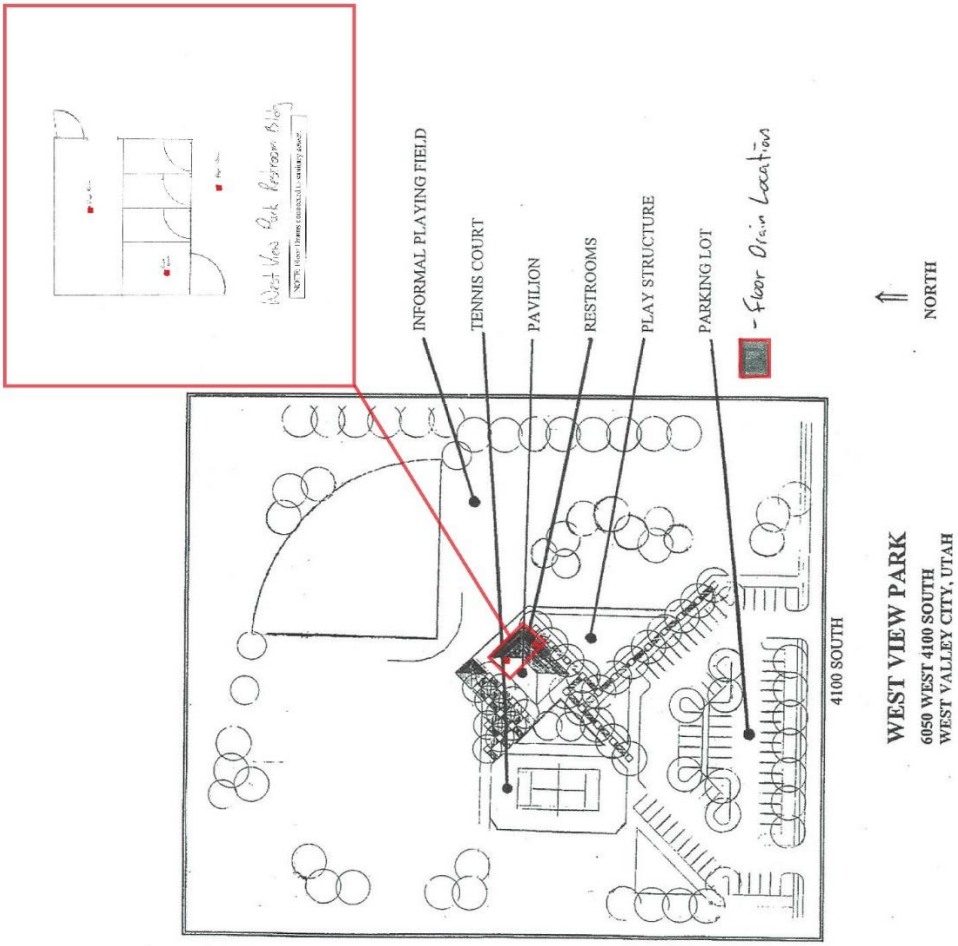
NOTE: Floor Drains connected to sanitary sewer.



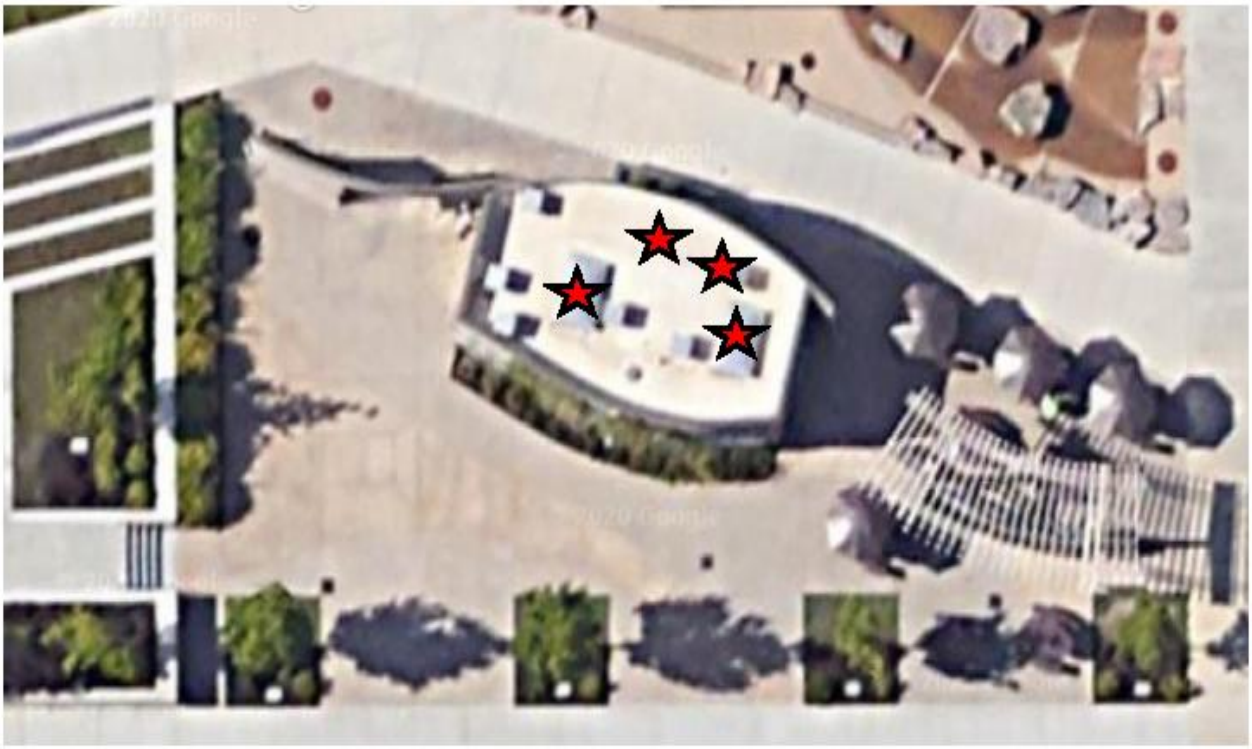
CITY PARK
3500 SOUTH 4505 WEST
WEST VALLEY CITY, UTAH



NOTE: Floor Drains connected to sanitary sewer.



NOTE: Floor Drains connected to sanitary sewer.



Location of floor drains at Promenade ★

APPENDIX B – SOPs

Park Maintenance Facility SOPs / BMPs

- Pavement Maintenance Operations
- Landscape Maintenance Operations
- Waste Management Operations
- Storm Drain Maintenance Operations
- Pavement Washing Operations
- Snow and Ice Removal Management
- General Construction Maintenance
- Spill Response and Control
- Equipment / Landscape Material Storage

Park and Open Space Maintenance - BMPs / SOPs

- Lawn Maintenance
  - Mowing
  - String Trimming
  - Edging
  - Debris Blowing
- Vehicle / Equipment Maintenance and Storage
- Vehicle and Equipment Refueling Procedures
- Vehicle and Equipment Cleaning
- Power Washing and Cleaning
- Use Procedures for Pesticides, Herbicides, and Fertilizers
  - Granular Applications
  - Liquid Applications
  - Chemical Storage
- Waste and Trash Management
- Cleaning of Garbage Containers
- Sweeping Parking Lots and Roads
- Spill Prevention and clean up procedures
  - Materials and Waste Handling and Storage
  - Spill kits
  - Gasoline or Diesel Spills
  - Hydraulic Spills
  - Granular Spills
  - Liquid Spills
  - Fuel Spills
- Pet Waste Disposal
- Storm Water Training & Inspections
- Cold Weather Operations
- Right of Way Maintenance
- Municipally-Sponsored Events

Park Maintenance - Facility SOPs / BMPs

Pavement Maintenance Operations

General:
These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

1. Purpose and Selection:

a) Reduce stormwater pollution by sweeping and removing pollutants that will be carried to City stormwater systems during stormwater runoff or by non-stormwater runoff.
b) The sweeper is intended for removing material that collect on pavements by use and the natural degradation of pavements, ie. material that collect, drop from vehicles and the natural erosion and breaking up of pavements.

2. Regular Procedure:

a) Remain aware of debris and sweep minor debris is needed by hand.
b) Generally sweeping machinery should be used during autumn when leaf fall is heavy and early spring after winter thaw. Sometimes sweeping machinery will be necessary when accumulations are spread over a large area of the pavement.
c) Manage outside activities that leave waste or drain pollutants to our pavements. Do not allow activities that allow detergents or other pollutants to be wash into storm drain systems.

4. Disposal Procedure:

a) Service contractor dispose at licensed facilities
b) Dispose of hand collected material in dumpster

5. Training:

a) Annually and at hire

Landscape Maintenance Operations

General:
This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

Rule: Prevent any solids, liquids or any lightweight material from being carried away from the construction or maintenance envelop by wind or water.

1. Application:

a) This SOP should provide sufficient direction for many of the general landscaping operations, e.g., fertilizer and pesticide applications, mowing, weeding, tree trimming, digging, sprinkler repairs, varying landscape cover management, etc.

2. Maintenance Procedure:

a) Grooming
   - Lawn Mowing – Immediately following operation sweep or blow clippings onto vegetated ground.
   - Fertilizer Operation – Prevent overspray. Sweep or blow fertilizer onto vegetated ground immediately following operation.
   - Pesticide Operations – Prevent overspray, use spot treatment, sweep or blow dry pesticide onto vegetated ground immediately following operation.

b) Remove or contain all erodible or loose material prior forecast wind and precipitation events, before any non-stormwater will pass through and over the project site and at end of work period. Light weight debris and landscape materials can require immediately attention when wind expected.

c) Landscape project materials and waste can usually be contained or controlled by operational best management practices.
   - Operational; including but not limited to:
     - Strategic staging of materials eliminating exposure, such as not staging on pavement
     - Avoiding multiple day staging of landscaping backfill and spoil on pavements
     - Haul off spoil as generated or daily
     - Scheduling work when weather forecast are clear.

d) Cleanup:
   - Use dry cleanup methods, e.g. square nose shovel and broom and it is usually sufficient when no more material can be swept onto the square nosed shovel.
   - Power blowing tools

3. Waste Disposal:

a) Dispose of waste according to General Waste Management SOP, unless superseded by specific SOPs for the operation.

4. Equipment:

a) Tools sufficient for proper containment of pollutants and cleanup.
b) Push broom and square blade shovel should be a minimum.

5. Training:

a) Annually and at hire
b) Landscape Service Contractors must have equal or better SOPs.

Waste Management Operations

General:
This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Application:

a) This SOP is intended for all Staff, intended for the proper disposal of common everyday waste.

2. Waste Collection Devices (Exposed units):

a) The site contains a 30-yard waste container.

3. Waste Disposal Restrictions for all waste Scheduled for the Salt Lake County Landfill:

a) Generally, most waste generated at this property, and waste from spill and clean-up operations can be disposed in our dumpster under the conditions listed in this SOP. Unless other disposal requirements are specifically identified by the product SDS or otherwise specified in other SOPs.
b) Know the facility disposal requirements and restrictions. It should not be assumed that all waste disposed in collection devices will be disposed at the Salt Lake County Landfill.
c) Review Salt Lake County Landfill regulations for additional restrictions and understand what waste is prohibited in the Salt Lake County Landfill. Ensure the SDS and Salt Lake County Landfill regulations are not contradictory.

Generally, the waste prohibited by the Salt Lake County Landfill is:

Liquid:

- paint
- pesticides/fertilizers
- oil (all types)
- antifreeze
- batteries
- liquid chemicals
- etc.

(Generally, *all the above hazardous waste when involved in minor spill cleanup operations can be disposed in covered dumpsters and our waste bays, if the liquid is contained in absorbent material, e.g. sand, dirt, loose absorbent, pads, booms etc., and transformed or dried such that it will not*

drip. This is not intended for wholesale disposal of outdated or spent liquid hazardous waste. When disposal of outdated or spent liquid is needed or for questions of how to dispose of other waste, contact the Salt Lake County Health Department (SLCoHD) for instructions and locations, (385)468-4100.

4. Waste Disposal Required for Salt Lake Valley Solid Waste or other:

a) Generally, for waste not accepted by the Salt Lake Valley Solid Waste landfill.
b) Follow SDS for disposal requirements. Review Salt Lake County Solid Waste regulations for additional restrictions and understand what waste is prohibited in the Salt Lake Valley Solid Waste landfill. Ensure the SDS and Salt Lake Valley landfill regulations are not contradictory
General rules are:
    - Get approval prior to delivery.
    - Transport waste in secure leak proof containers that are clearly labeled.
c) Lookup and follow disposal procedures for disposal of waste at other EPA approved sites, the Salt Lake Valley Solid Waste landfill is a good resource, (385)468-6370.

5. General Staff Maintenance Practices:

a) Prevent dumpsters and receptacles from becoming a pollution source by:
    1. Closing lids
    2. Do not over fill dumpsters.
    3. Reposition tipped receptacles upright.
    4. Report full or leaking and unsecured dumpsters and receptacles to the company provider or repair it in house. Determine source liquids and prevent it.
    5. Report any eminent pollutant hazard related to dumpsters and receptacles to the owner.

6. Training:

a) Annually and at hire

Storm Drain Maintenance Operations

General:
These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

1. Procedure:

a) Inspect for need:
   1. Schedule cleaning for boxes and pipe that contain 2" or more of sediment and debris.
   2. Remove debris by vacuum WVC Public Works operated machinery.
   3. When accumulations are mostly floating debris this material can be removed with a net.
   4. Inspect standing water for mosquito larvae and contact the MAGNA MOSQUITO ABATEMENT DISTRICT when necessary at (801) 250-7765.

2. Disposal Procedure:

a) Dispose of waste collected by machinery at regulated facilities.
b) Floating materials and floating absorbent materials may be disposed in dumpster when dried out. Dry dirt and slurry may also be disposed in the dumpster.
c) Disposal of hazardous waste
   1. Dispose of hazardous waste at regulated disposal facilities, see Waste Management and Spill Control SOP
d) Disposal of waste collected from sanitary sewer device at regulated facilities.

3. Training:

a) Annually and at hire

Pavement Washing Operations

General:
These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

1. Procedure:

a) Prevent waste fluids and any detergents if used from entering storm drain system. The following methods are acceptable for this operation.
   - Dam the inlet using a boom material that seals itself to the pavement and pick up the wastewater with shop-vacuum or absorbent materials.
   - Collect wastewater with shop-vacuum simultaneous with the washing operation.
   - Collect wastewater with WVC Public Works Sweeper/Vacuum truck simultaneous with the washing operation.

b) This procedure must not be used to clean the initial spills. First apply the Spill Containment and cleanup SOP.

2. Disposal Procedure:

a) Small volumes can usually be drained to the local sanitary sewer.
b) Large volumes must be disposed at WVC Public Works regulated facility.

2. Pavement Cleaning Frequency:

a) There is no regular pavement washing regimen. Pavement washing is determined by conditions that warrant it, including but not limited to: prevention of slick or other hazardous conditions or restore acceptable appearance of pavements.

3. Training:

a) Annually and at hire

Snow and Ice Removal Management

General:
This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Application:

a) Parking and sidewalk winter management operations.

2. De-Icing Procedure:

a) Do not store or allow salt or equivalent to be stored on outside paved surfaces.
b) Minimize salt use by varying salt amounts relative to hazard potential.
c) Sweep excessive piles left by the spreader.
d) Watch forecast and adjust salt amounts when warmups are expected the same day.

3. Training:

a) Annually and at hire.

General Construction Maintenance

General:
This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

Rule: Prevent any solids, *liquids or any lightweight material from being carried away from the construction or maintenance envelop by wind or water. *liquids - including culinary water and irrigation water that are polluted with material that will damage the environment.

1. Application:

a) This SOP should provide sufficient direction for many of the general operations, e.g., building maintenance, curb/sidewalk/flatwork, overlay/patching, landscape renovations, misc. maintenance/repairs, etc.

2. Construction Procedure:

a) Remove or contain all erodible or loose material prior forecast wind and precipitation events or before non-stormwater will pass through the project site. For light weight debris maintenance can require immediately attention for wind events and many times daily maintenance or as needed for precipitation or non-stormwater events.

b) Project materials and waste can be contained or controlled by operational or structural best management practices.
   - Operational; including but not limited to:
     - Strategic staging of materials eliminating exposure, such as not staging on pavement
     - Avoiding multiple day staging of backfill and spoil
     - Haul off spoil as generated or daily
     - Schedule work during clear forecast
   - Structural; including but not limited to:
     - Inlet protection, e.g. wattles, filter fabric, drop inlet bags, boards, planks
     - Gutter dams, e.g. wattles, sandbags, dirt dams
     - Boundary containment, e.g. wattles, silt fence
     - Dust control, e.g. water hose,
     - Waste control, e.g. construction solid or liquid waste containment, dumpster, receptacles

c) Inspection often to insure the structural best management practices are in good operating condition and at least prior to the workday end. Promptly repair damaged best management practices achieving effective containment.
d) Cleanup:
   - Use dry cleanup methods, e.g. square nose shove and broom.
   - Wet methods are allowed if wastewater is prevented from entering the stormwater system, e.g. wet/dry vacuum, disposal to our landscaped areas.
e) Cleanup Standard:
   - When a broom and a square nosed shovel cannot pick any appreciable amount of material.

3. Waste Disposal:

a) Dispose of waste according to General Waste Management SOP, unless superseded by specific SOPs for the operation.
b) Never discharge waste material to storm drains

4. Equipment:

a) Tools sufficient for proper containment of pollutants and cleanup.
b) Push broom and square blade shovel should be a minimum.

5. Training:

b) Annually and at hire.

Spill Response and Control

General:
This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes to routine operations must be amended in this SOP.

1. Rational:

a) All properties are susceptible to spills whether it is a result of operations or by customers. Insufficient response, inadequate containment materials and improper spill cleanup methods will result in pollutants in our waterways. Once the pollutants reach our storm drain system, or even the detention pond, they are difficult and expensive to remove.

2. Containment Procedure:

a) Priority is to dam and contain flowing spills.
b) Use spill kits booms if available or use any material available; including but not limited to, nearby sand, dirt, landscaping materials, etc.
c) Hazardous or unknown waste material spills
    - Critical Emergency constitutes large quantities of flowing uncontained liquid that will affect areas with people or reach storm drain systems. Generally, burst or tipped tanks. Call HAZMAT, DWQ, SALT LAKE CO HEALTH DEPARTMENT, WVC STORMWATER MGMT.
    - Minor Emergency constitutes a spill that has reached a storm drain but is no longer flowing. Call SALT LAKE CO HEALTH DEPARTMENT, WVC STORMWATER MGMT.
    - Spills that are contained on the surface and do not meet the criteria for Critical and minor emergencies may be managed by the responsible implementation of this SOP.
    - Contact Numbers:
        - HAZMAT - 911
        - DWQ – 801-536-4300
        - SALT LAKE COUNTY HEALTH DEPT. – 385-486-4100
        - STORMWATER MGMT. - WEST VALLEY CITY – 801-509-2005

3. Cleanup Procedure:

a) NEVER WASH SPILLS TO THE STORM DRAIN SYSTEMS.
b) Clean per SDS requirements but generally most spills can be cleaned up according to the following:

- Absorb liquid spills with spill kit absorbent material, sand or dirt until liquid is sufficiently converted to solid material.
- Remove immediately using dry cleanup methods, e.g. broom and shovel, or vacuum operations.
- Cleanup with water and detergents may also be necessary depending on the spilled material. However, the waste from this operation must be vacuumed or effectively picked up by dry methods. See Pavement Washing SOP.
- Repeat process when residue material remains.

4. DISPOSAL:

a) Follow SDS requirements but usually most spills can be disposed per the following b. & c.

b) Generally, most spills absorbed into solid forms can be disposed to the dumpster and receptacles. Follow Waste Management SOP.

c) Generally Liquid waste from surface cleansing processes may be disposed to the sanitary sewer system after the following conditions have been met:
   - Dry cleanup methods have been used to remove the bulk of the spill and disposed per the Waste Management SOP.
   - The liquid waste amounts are small and diluted with water. This is intended for spill cleanup waste only and never for the disposal of unused or spent liquids.

5. Documentation:

a) Document all spills in Appendix C.

6. SDS sheets:

a) SDS Manual is filed in copy room.

7. Materials:

a) Generally, sand or dirt will work for most clean-up operations and for containment. However, it is the responsibility of the owner to select the absorbent materials and cleanup methods that are required by the SDS Manuals for chemicals used by the company.

8. Training:

a) Annually and at hire.

Equipment / Landscape Material Storage

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes to routine operations must be amended in this SOP.

1) **Equipment and Material**
   a) All equipment and materials must be stored in such a manner to prevent contamination to the storm water system.
   b) When possible, store indoors away from wind and rain. If needed, cover with a tarp or other impermeable covering to prevent deterioration and the possibility of contaminated runoff.
   c) Inspect frequently for leaks, deterioration or other possible pollutants.
2) **Salt Equipment Storage**
   a) Salt insert sanders and plows will be stored under cover at the Red Barn or Tin Shed when not installed on the trucks. This area will be deep cleaned as a part of the semi-annual deep cleaning schedule.
3) **Fuel Station/Tank Area**
   a) This site does not have a fueling station/tank at this time. Fuel used onsite is stored inside the storage building in approved fuel storage cabinets.
4) **Equipment Washout**
   a) All vehicle and equipment washing is to be performed at the Public Works Facility Wash Out Bay or a commercial car wash. When cleaning mowing equipment, it is to be done inside the maintenance shop where loose material is promptly swept up thrown into the trash.
5) **Management of Mulch, Sand and other Large Particulates:**
   a) Playground mulch is stored at the Tin Shed and then distributed to the various playgrounds. Mulch piles are placed in an area that is bordered by concrete k-rails so that is not a threat to storm water contamination.
   b) All bagged materials must be stored indoors whenever possible. If they must be stored outdoors, place them under a cover.
   c) All dry materials stored outside should be covered and have secondary containment.
   d) Place materials as far from storm drains as possible.
   e) Clean up any spills, leaks or discharges promptly.
6) **Paints and Solvents:**
   a) These are stored inside the shop facility in a dedicated room.
   b) Any spills on or off site are cleaned up with the appropriate measures.

Park Maintenance BMPs / SOPs

Objective: Onsite management of mowing, trimming, edging, debris removal and fertilizer and pesticide applications to provide a safe working environment and pollution free parks.

Lawn Maintenance

Mowing

- Read manual if available and become familiar with machine safety.
- Watch safety/training videos.
- Inspect mower before operating. Ensure all guards and shields are in place. Check for loose bolts/nuts and tighten if necessary. Do not make repairs or adjustment to mower while engine is running, unless owner's manual states otherwise.
- Eye and ear protection is provided and is requires that it be worn while operating any type of power equipment.
- Check the mower for presence of an enclosed canopy for head protection or ensure proper head protection be used.
- Check fluid levels before starting daily work and after lunch.
- Check area to be mowed and remove all trash, papers, bottles, rocks and other debris.
- When mowing: always make two to three passes around the outside, discharging clippings to the inside of the property being mowed.
- Always maintain a safe operating distance from people, at least 40 feet. If people are using the area you are mowing, mow around them, maintaining a safe distance, or ask them to move. **Always discharge clippings away from people.**
- After mowing, blow all grass clippings from walks and ensure curbs and gutters are cleaned of all grass clippings and dirt.
- Avoid hitting and damaging objects with mower by maintaining a safe distance between objects and mower. Be especially careful not to hit trees.
- When transporting, always ensure mower is fastened securely to trailer with chains and/or straps. Apply parking brake properly.
- Exercise extra care while mowing on slopes. Wear seat belts and ensure all safety systems are in place. Avoid sudden starts and stops on slopes. Do not park on slopes.
- Always refuel safely, follow refueling SOPs.
- Have a complete functioning spill kit available in the event of a spill.

String Trimming Procedures

Before Using:

- Check string trimmer to ensure all guards and safety devices are properly installed and are not broken
- Ensure all bolts, screws and fasteners are tight
- Check fuel level
- Check trimmer line
- Report any broken, missing or loose parts so they can be fixed before use

During Use:

- Safety glasses and ear plugs are required
- Wear long pants or suitable leg protection (such as chaps)
- Areas to be trimmed: curbs, gutters, sidewalks, parking lots, flower and shrub beds, and tree rings.
- Try to trim such that clippings are thrown onto grass and not into flower beds, walks and gutters
- Stay at least 3" from trees, for trees with overgrown tree rings, unless approved by Parks Forester or appropriate supervisor
- String trimmers throw rocks and other debris, ensure the area your are trimming is free of trash, rocks or debris
- Exercise extreme caution when trimming around vehicles
- Do not string trim around other people
- Do not scalp the grass with string trimmer
- Edges should be squared off, not scalloped
- Follow refueling procedures when refueling
- If you have any questions, please ask appropriate supervisor

Edging Procedures

Before Using:

- Make sure you know whether the edger has a two stroke or four stroke engine. Use mixed fuel for two stroke edger. Use regular fuel for four stroke edger.
- Check edger to ensure all guards and safety devices are properly installed and are not broken
- Ensure all bolts, screws and fasteners are tight.
- Check fuel level and add as needed following refueling procedures
- Check oil level, if applicable.
- Check edger blade for wear and change if worn.
- Report any broken, missing or loose parts so they can be fixed before use.

During Use:

- Safety glasses and ear plugs are required.
- Stay behind machine.
- Set blade depth to cut the edge between ¼ to ¾ of an inch deep.

- Stay next to sidewalks and curbs, trying to grind as little of the concrete as possible.
- Stop blade when changing from one area to another.
- Exercise extreme caution when edging around vehicles.
- Watch for sprinkler heads, do not cut them.
- Edges should be squared off to 90 degrees.
- Check blade for wear, replace when needed.
- Make sure edger is shut off before performing maintenance or repairs.
- Follow refueling procedures when refueling.
- If you have any questions, please ask appropriate supervisor.

Debris Blowing Procedure

Before Using:

- Check blower to ensure all guards and safety devices are properly installed and are not broken.
- Ensure all bolt, screws and fasteners are tight.
- Check fuel level and add as needed following refueling procedures.
- Report any broken, missing or loose parts so they can be fixed before use.

During Use:

- Safety glasses and ear plugs are required.
- Blow debris from sidewalks, cart paths, jogging paths, parking lots, and curb and gutters
- Blow grass clippings and other green waste back onto turf.
- Pick up garbage.
- Ensure curb and gutters are clean to prevent any debris from entering the storm drain system.
- Exercise extreme caution when blowing around vehicles.
- Do not blow debris at people.
- Make sure blower is shut off before performing maintenance or repairs.
- Follow refueling procedures when refueling.
- If you have any questions, please ask appropriate supervisor.

Vehicle / Equipment Maintenance and Storage

- Inspect parking areas for stains/leaks on a regular basis.
- Provide drip pans or adsorbents for leaking vehicles.
- Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer system.
- When inside storage is not available, Vehicles and equipment will be parked in the approved designated areas.
- Maintain vehicles to prevent leaks as much as possible.
- Address any known leaks or drips as soon as possible. When a leak is detected a drip pan will be placed under the leaking vehicle to collect the drip.
- If any leaks are discovered, a drip pan will be used to collect the fluids and vehicle will be scheduled for repairs.
- Clean up all spills using dry methods.
- Never store leaking vehicles over a storm drain.
- Visually check equipment to ensure all safety equipment is functional.
- Check for leaks i.e. hydraulic, cooling, engine fluids or fuel daily.
- Read all applicable service manuals and develop service plans to ensure all service parts are replaced as to date and hours on the equipment.
- Make sure all hoses and related equipment are replaced when required by the service manual to reduce spills.
- Dispose of all fluids in a manner not to pollute storm water drainage or sewer system.
- In the event of a spill the machine is to be put on a trailer and brought to the shop for repair. Prevent spilling the contaminant on the ground during transport. Unless the leak can be repaired in the field.
- Any leaks that are spilled on the asphalt will be cleaned up with dry absorbent; the dry absorbent will be swept up and disposed of in the garbage.

Vehicle and Equipment Refueling Procedures

In areas with a fuel pump:

- Park next to appropriate pump
- Turn off engine
- While equipment is being refueled, stay where you can see nozzle.
- If a spill occurs, spread appropriate spill containment material (located by pumps) to soak up the spill, and then dispose of properly.
- If spill occurs fill out spill report and turn in to supervisor.

If refueling in a park or on a golf course using a gas can:

- If possible, get to a hard surface such as a parking lot, sidewalk or cart path.
- Turn off engine. Allow the engine to cool for a few minutes. Never fill a hot engine.
- Use caution while refueling to ensure fuel does not spill.

- If spill occurs, spread appropriate spill containment (pad or calcined clay, located on the equipment or transport vehicle), and clean up as required.
- If spill occurs fill out spill report and turn in to supervisor.

Vehicle and Equipment Cleaning

- Vehicles and equipment are to be washed on approved wash areas only. Approved areas are at the Public Works approved wash out area or a commercial wash facility that empties to the sanitary sewer system.
- Washed vehicles or equipment is never to be washed where water could enter the storm drain system or open water.

Power Washing and Cleaning

- Wastewater from power washing must not be allowed to enter the storm sewer system and must be disposed properly.
- Power washing combined with proper wastewater collection can prevent or reduce fine-grained sediment particles, anti-freeze, oil, paint, or trash from polluting stormwater.
- When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable municipal, state, and federal codes, laws, and regulations.
- Use dry methods for surface pre-cleaning, such as using sorbent material on small oil spots and sweeping up trash, debris, dirt, and used sorbent before power washing;
  Minimize the amount of water used during power washing activities; and
- Avoid using cleaning products that contain hazardous substances (e.g., hydrofluoric acid, muriatic acid, sodium hydroxide, bleach) that can turn wastewater into hazardous waste.
- Train employees who perform power washing activities on this written procedure. Information regarding how to avoid and report spills will be presented during the training.

Use Procedures for Pesticides, Herbicides, and Fertilizers

It is important to properly store, handle, apply, and clean up all fertilizers, herbicides, pesticides, and other landscaping chemicals. These chemicals can cause water pollution. Excessive fertilizer application can also contribute to algae blooms and deplete oxygen from waterways. When services are contracted, this written procedure should be provided to the contractor, so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable municipal, state, and federal codes, laws, and regulations.

Granular Application

- Read and understand all labels, and application instructions
- Ensure spreading device is calibrated or adjusted correctly
- Apply to desired area at proper rates
- Any product that is spread onto pavement by accident should be swept or blown back onto treated area where possible, if it is not possible, proceed to step five
- If a spill occurs:
    - Clean up spills by sweeping, or blowing product into a pile and collecting
    - Use on another property when possible.
    - Notify your supervisor
    - Fill out a spill reporting form after the clean-up process
    - Forms are in the SWPPP binder.

Liquid Applications

- Read and understand all labels and all application instructions
- Ensure application device is calibrated, adjusted, and operating properly
- Fill tanks in the field whenever possible
- When installing chemicals into holding tank, use caution to avoid spilling
- Apply to desired areas at proper rates
- Try to empty spray tanks by the end of each day to prevent the need to store mixed chemicals (this does not apply to fertilizer injectors)
    - If a spill occurs follow proper cleaning procedures using mats, absorbent material, and waddles to prevent spreading.
    - Dispose of absorbent material properly according to the label.
    - Notify your supervisor and fill out a spill reporting form.
    - Forms are in the SWPPP binder

Chemical Storage

- All fertilizer and pesticide containers are in a designated area and in accordance with the storage requirements listed on the label.
- Fertilizers and pesticides are only to be used as directed on product label. The label is the law.
- Liquid Formulations are to be stored on containment bins to contain any size leaks.
- Granular formulations are to be swept and removed off paths and roadways after application to prevent contamination of the stormwater system.
- Never apply a product to adjacent waterways unless product label indicates that it is safe to do so.
- Fertilizer and pesticide applicators will be licensed or supervised directly by a licensed applicator.
- In the event of a spill, the affected area will be cleaned and treated as the label of the formulation requires.

Waste and Trash Management

- Trash cans in parks are to be emptied weekly.
- Parks and open spaces are to be policed for debris on a regular basis to prevent trash and debris from entering the storm water system.
- Trash cans must be kept clean and in good working condition. Trash containers must be kept upright, and lids must be kept closed to prevent trash from moving into the storm water systems.

Cleaning of Garbage Containers

- Garbage containers are to be washed out on an appropriate wash pad.
- Wash water is to be treated before entering sewer system.
- Wash water is never allowed to drain into storm drains

Sweeping Parking Lots and Roads

The sweeping of streets and parking lots gives the Parks an overall clean appearance, and aids in helping reduce traffic accidents and air pollution caused by fine dust particles. Street sweeping can prevent pollutants such as sediment particles, organics, oil, grease, trash, road salt, and trace metals from entering and plugging the storm sewer system. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable municipal, state, and federal codes, laws, and regulations.

- Sweeping is performed by WVC Public works and is scheduled with the adjoining streets and neighborhoods.
- Schedule additional sweepings, as needed.
- Construction conducted by the County where there is temporary storage of construction materials like dirt, sand, and road base along the roadway
- Special events (e.g., street fairs, art shows, and parades) where additional debris is likely to have accumulated
- Grass cutting, including and mowing, trimming, and edging – make sure that all debris created from maintenance of lawns, medians and open spaces is either blown back into the existing landscape with a handheld or back pack blower or swept up by hand and disposed of properly (i.e., not in the street or parking lot)
- Landscape planting
- After heavy rainstorms in which sediment is present on the streets
- After snows melt where large course sediments and garbage have been left behind.

Spill Prevention and clean up procedures

Materials and Waste Handling and Storage

- If possible, liquid or hazardous materials should be handled, used, stored, repackage and transferred indoors or under cover.
- Deliveries of bulk liquids should be supervised. Down gradient storm drain inlets
- should be covered during deliveries.
- Cover and contain containers, materials and wastes.
- Keep all containers closed unless adding or removing materials.

Spill Kits

- Spill kits are located at the Park Maintenance Facility and in the trucks dedicated to mowing and spraying.
- Inspections of spill kit and re-supplying is done monthly.

Gasoline or Diesel Spills

- Immediately stop
- Turn off engine
- Remove kit contents immediately put on latex gloves
- Assess nature of spill. Gasoline, diesel, oil, or anti-freeze.
- Act quickly but safely, use absorbent pads and rolls to surround and contain spill.
- Contact Supervisor for appropriate pan, bucket, etc. to stop spill from reaching the Stormwater system.
- Dispose and decontaminate the area using containment bag in the kit and in
- compliance with local state and federal regulations.
- If necessary, decontaminate the spill site, personnel and equipment.
- Fill out the spill reporting form file with your supervisor

Hydraulic spill

- Immediately stop
- Turn off engine
- Remove kit contents immediately put on latex gloves
- Assess nature of spill.
- Act quickly but safely, use absorbent pads and rolls to surround and contain spill.
- Contact Supervisor for appropriate pan, bucket, etc. to stop spill from reaching the containment pads.
- If spill reaches soil dig up affected area. Dispose of soil appropriately.

Granular Spill

- Clean up spills by sweeping, or blowing product into a pile and collecting
- Use on another property when possible
- Notify your supervisor
- Fill out a spill reporting after the cleanup process

Liquid Spill

- Follow proper cleaning procedures using mats, absorbent material, and waddles to prevent spreading
- Dispose of properly
- Notify your supervisor
- Fill out a spill reporting form after the cleanup process

Fuel Spills

- Put waddles around storm drain**s**
- Cover storm drain
- Use absorbent pads and or calcified clay or other absorbent
- Dispose of absorbent properly

Pet Waste Disposal

- Adopt and enforce ordinances that require pet owners to clean up pet wastes and use leashes in public areas.
- If public off-leash areas are designated, make sure they are clearly defined. Avoid designating public off-leash areas near streams and water bodies.
- Whenever practical and cost effective, install dispensers for pet waste bags and provide disposal containers at locations such as trail heads or parks where pet waste has been a problem. Provide signs with instructions for proper cleanup and disposal.
- Check parks and trails for pet waste as needed.
- Remove all pet waste; provide temporary storage in a covered waste container and dispose of properly. Preferred method of disposal is at a solid waste disposal facility.
- Document problem areas for possible increased enforcement and/or public education signs.

Storm Water Training & Inspections

- Pollution preventions training for all park personnel will be performed annually. This training will also be part of orientation of new employees as well as rehired seasonal employees.
- Employees are supervised to ensure compliance.
- Sites are inspected Monthly, Semi-Annually and Annually by qualified personnel.
- SWPPP binder will be kept in the copy room accessible to all employees.

Cold Weather Operations

- Inspect plows, trucks and equipment for leaks before use.
- Never push snow into catch basins or inlets where it will obstruct stormwater flow.
- Use ice melt products sparingly and as directed.
- Sweep up spills to prevent stormwater contamination.

Right of Way Maintenance

- ROW maintenance uses the Landscape SOPs previously listed.
- Inspect and report any damage or compromise to ROW areas promptly.
- Do not attempt to clean up any unidentified or possibly hazardous materials found on or around the ROW areas during maintenance; notify supervisor immediately upon discovery of hazardous materials.
- Always wear proper PPE while working in ROW areas.
- Follow labels for all fertilizer, herbicides and pesticides that are used in ROW areas.

Municipally Sponsored Events

Large outdoor festivals and events operated and controlled by the City have the potential to impact stormwater quality. Potential contaminants may include trash, septage and organics. Large events must meet the following criteria: adequate restroom facilities, trash receptacles and drinking water. Events must be properly permitted by the City and where needed, the County.

Trash Collection and Removal

Provide adequate trash receptacles for vendors and guests
Monitor and respond to leaking waste containers
Empty trash receptacles to prevent overflow
S

APPENDIX C – PLAN RECORDKEEPING DOCUMENTS

MAINTENANCE/INSPECTION SCHEDULE

Frequency	Site Infrastructure.
M	Full site inspection done by Superintendent or Facilities Supervisor. Records on Cityworks.
B	Full site inspection done by Superintendent or Facilities Supervisor, Storm Water Maintenance Supervisor and Engineering Storm Water Inspector. Records on Cityworks.
A	Observe outfall from site and take water sample to check for oil/solid pollutants. Records on Cityworks.

Inspection Frequency Key: A=annual, Q=Quarterly, M=monthly, W=weekly, S=following appreciable storm event, U=Unique infrastructure specific (specify)

RECORD INSPECTIONS IN THE MAINTENANCE LOG

Inspection Means: Either; Traditional walk through, Awareness/Observation, and during regular maintenance operations while noting efficiencies/inefficiencies/concerns found, etc.

STANDARD OPERATING PROCEDURE **PARKS MAINTENANCE DIVISION** **ACTIVITY:** **MONTHLY OPERATIONS AND MAINTENANCE SITE INSPECTION**		**ISSUE DATE:** MM/DD/YYYY
APPROVED BY: _____ Department Director or Division Head		
PERMIT REQUIREMENT SUMMARY: X.X.X.X.X Summary of Activity	**TARGETED POLLUTANTS OR HAZARDS:**	

A. PURPOSE/DESCRIPTION:

1. Provide comprehensive visual inspection for high-priority city owned facilities. Record monthly the observations made, with a full UPDES report done annually.

B. WORK PROCEDURES:

1. Walk through the entire outside maintenance areas and look for any evidence of the following:
   a. Any oil/contaminants present on the ground from the equipment.
   b. Trash/debris around site that should be in swept up
   c. Drainage swell free of debris
   d. Floatables/silt in the catch basins
   e. Housekeeping issues needing attention

C. CREW MEMBERS INVOLVED:

1. 1 Crew Member

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a. Safety shoes, safety glasses, hard hat (if necessary)

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All records will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **PARK MAINTENANCE DIVISION** **ACTIVITY:** **SEMI-ANNUAL OPERATIONS AND MAINTENANCE SITE INSPECTION**		**ISSUE DATE:** MM/DD/YYYY
APPROVED BY: _____ Department Director or Division Head			
PERMIT REQUIREMENT SUMMARY: X.X.X.X.X Summary of Activity		**TARGETED POLLUTANTS OR HAZARDS:**	

A. PURPOSE/DESCRIPTION:

1. Provide comprehensive visual inspection for high-priority city owned facilities.

B. WORK PROCEDURES:

1. Walk through the entire outside maintenance areas and look for any evidence of the following:
   a. Any oil/contaminants present on the ground from the equipment
   b. Trash/debris around site that should be in swept up
   c. Drainage swell free of debris
   d. Floatables/silt in the catch basins
   e. Housekeeping issues
   f. Make sure all garbage container lids are closed
   g. Floor dry bins needing absorbent by the fuel pumps
   h. Inspect and Maintenance COB/OWS
   i. Inspect spill kits

C. CREW MEMBERS INVOLVED:

1. 1 Crew Member

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety shoes
   b) Hard hat (if necessary)

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All records will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **PARK MAINTENANCE DIVISION** **ACTIVITY:** **ANNUAL OPERAIONS and MAINTENANCE SITE INSPECTION**		**ISSUE DATE:** MM/DD/YYYY
APPROVED BY: _____ Department Director or Division Head			
PERMIT REQUIREMENT SUMMARY: X.X.X.X.X Summary of Activity		**TARGETED POLLUTANTS OR HAZARDS:**	

A. PURPOSE/DESCRIPTION:

1. Provide comprehensive visual inspection for high-priority city owned facilities.

B. WORK PROCEDURES:

1. Walk through the entire outside maintenance areas and look for any evidence of the following:
   a. Any oil/contaminants present on the ground from the equipment.
   b. Trash/debris around site that should be in swept up
   c. Drainage swell free of debris
   d. Floatables/silt in the catch basins
   e. Inspect spill kits
   f. Make sure all garbage container lids are closed.
   g. Inspect housekeeping
   h. Visually observe the quality of the storm water discharge from site during the first half hour of a measurable storm. Document color, floatables, smells, contaminant sheen (if present)

C. CREW MEMBERS INVOLVED:

1. 1 Crew Member

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety shoes
   b) Hard hat (if necessary)
   c) Rubber gloves

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All records will be kept on Cityworks

SMALL NON HAZARDOUS SPILL CLEAN-UP REPORTING FORM

Your Name_____

Your division_____

Address of spill_____

Was the spill caused by a city vehicle? If so V I D #_____

Was the spill caused by a citizen/employee_____

Describe the spill_____

_____

_____

Can you identify the material of the spill? _____YES NO (Circle one)

_____

Did the spill go into the storm drain?_____YES NO (Circle one)

_____

About how much was spilled?_____

How did you contain the spill?_____

_____

How did you clean up the spill?_____

_____

How did you dispose of the spilled material?_____

_____

How did you notice the spill?_____

_____

What kind of surface was it on?_____

Date and Time the spill was cleaned up?_____

SPILL LOG
STORM WATER POLLUTION PREVENTION PLAN
WEST VALLEY CITY
PARKS AND GOLF COURSES

DATE	LOCATION	WHAT SPILLED	PROPERLY CONTAINED & CLEANED	MANAGER NOTIFIED

STORM WATER POLLUTION PREVENTION TRAINING
WEST VALLEY CITY
PARK MAINTENANCE DIVISON

Date	Name	Location	Type

MAINTENANCE LOG

Date	Maintenance Performed. Perform Maintenance per SOPs	Observation Notes, including but not limited to; Inspection results, Observations, System Performance (effectiveness/inefficiencies), SOP Usefulness, Concerns, Necessary Changes…	Initials

West Valley City
Parks and Recreation Department
Parks and Golf Courses Maintenance

Objective: On site management of potential pollutants as they relate to storm water contamination.

Table of Contents:

Section 1: Storm water protection plan
Section 2: Lists of parks and golf courses and maps
Section 3: Standard Operating Procedures
Section 4: Description and frequency of tasks
Section 5: Spill prevention plan and clean up procedures
Section 6: Forms used for reporting and logging incidents

Parks and Recreation
Golf Courses and Parks
Storm Water Management Plan (2020)

Objective: On site management of potential pollutants as they relate to storm water contamination.

Items of Concern:

1. Parking Lots
2. Maintenance Facility Parking Lots
3. Fertilizer and Pesticide Management
4. Disposal Food and Beverage Oils
5. Disposal of Engine Oils
6. Management of Grass clippings, Sand, and other Large Particulates.
7. Gasoline and Diesel
8. Waste Disposal
9. Training and Records

1) Parking Lots: Storm Water is collected in boxes throughout the Parking Areas. These are cleaned on a regular basis and or included a fabric cover to collect clippings and Parking lot residue.

2) Maintenance Facility Parking Lots: The Storm Water collected in these lots is in the same collection system as the Parking Lots. However, these lots are swept due to the amount of material in the lots associated with grounds maintenance. Fabric covers maybe employed in these areas.

3) Fertilizer and Pesticide Management: All Fertilizer and Pesticides used on the Golf Courses and Parks are stored in the Maintenance Facilities designated fertilizer and chemical storage room/area. Spill containment pallets are used for the following items: Granular and Liquid Fertilizers, Herbicides (selective and non-selective), Granular and Liquid Fungicides, all Paints (excluding Aerosols). Liquid spills are cleaned with sawdust and/or spill absorbents. Granular spills are collected and used on the golf course for turf grass nutritional purposes.

4) Disposal of Food and Beverage Oils: Used oils are contained in 55 Gallon Drums on spill containments pallets and collected by Emerald Recycling Company on an as-needed basis.

5) Disposal on Engine Oil: Used oil is collected in the Maintenance Facilities in 55-gallon drums which are recycled by Emerald Recycling Company on an as-needed basis. Spills are cleaned with sawdust and oil absorbent materials.

6) Management of Grass Clipping, Sand and other Large Particulates: The wash areas for all Maintenance Equipment are designed containment areas, channeling all wash water and other materials into a holding tank or onto turf. West Valley City Public Works Dept. will empty tank on a regular schedule, estimated at biweekly.

7) Gasoline and Diesel: Spill containment is managed in two ways.

A. Golf Course Fuel tanks are of the Convolute type. This is a fuel tank within a containment tank. Containment 100%.
B. The redundant system is a fuel area containing the tanks. A concrete curb wall surrounds the fueling area; containment is a second 100%. For spills outside of the fueling area a drum of absorbent is kept and maintained at the fueling center at all times.

8) Waste Disposal: Solid waste disposal is contracted with Waste Management. Used oil disposal is recycled with Emerald Recycling Company. Clippings from mowers are primarily not collected on the golf course or in Parks. Collected clippings are recycled for mulch around trees and other woody plants.

9) Employee Training and Records: Monthly safety/operational meetings are held with the maintenance staff. These meetings concern aspects of safety, water management, customer relations, materials handling, and other BMP's concerning the golf course maintenance operations. Attendance and subjects are recorded in the golf course SWPPP and inspected by storm water inspectors on a quarterly basis. The Public Works dept. conducts these inspections.
Weekly observations/inspections of areas are conducted and recorded. These forms are part of the SWPPP on-site.

Contact List

West Valley City Parks Department
2855 S. 3600 W.
West Valley City, Utah 84119

Parks Superintendent
Kent Jensen (801) 509-1934

The Ridge Golf Club
5055 W. Westridge Blvd.
West Valley City, Utah 84118

Golf Course Superintendent
Robert Winter 801-509-2313

Head Golf Professional
Bryan Abney (801) 509-1965

Food and Beverage Manager
Jeremy Erkilla 801 957-9000

Stonebridge Golf Course
4415 Links Dr.
West Valley City, Utah 84120

Golf Course Superintendent
Matt Isbell 801 509-1961

Head Golf Professional
Clark Garso 801 957-9000

Food and Beverage Manager
Jeremy Erkilla 801 957-9000

The Ridge Golf Club

5055 W. Westridge Blvd.
West Valley City, Utah 84118

The Ridge is an 18-hole golf course that sits on approximately 200 acres with 120 acres of maintained turf, the remaining acreage consisting of lakes, streams, and native grass areas.

- The Ridge Clubhouse is approximately 12,000 sq. feet. This includes a pro shop, café, full-size kitchen, large banquet area, offices, men's and women's restrooms, and a golf cart storage area.

- The Ridge Maintenance building is located at 5335 South Ridge Village Drive. It is an 8000 square foot building with three offices, men's and women's bathrooms with showers, a break room, a chemical storage room, mechanical room, and grinding room.

- There are 2 small restrooms on the course.

- The Driving Range building with men's and women's bathrooms, storage, and ball wash area

- The pumphouse near 6400 West is used for irrigating the golf course.

Ridge Maintenance floor drain locations
All floor drains go to sewer system

1. Women's Restroom
2. Men's Restroom
3. Mechanical Room
4. Main Shop, North and South Sides

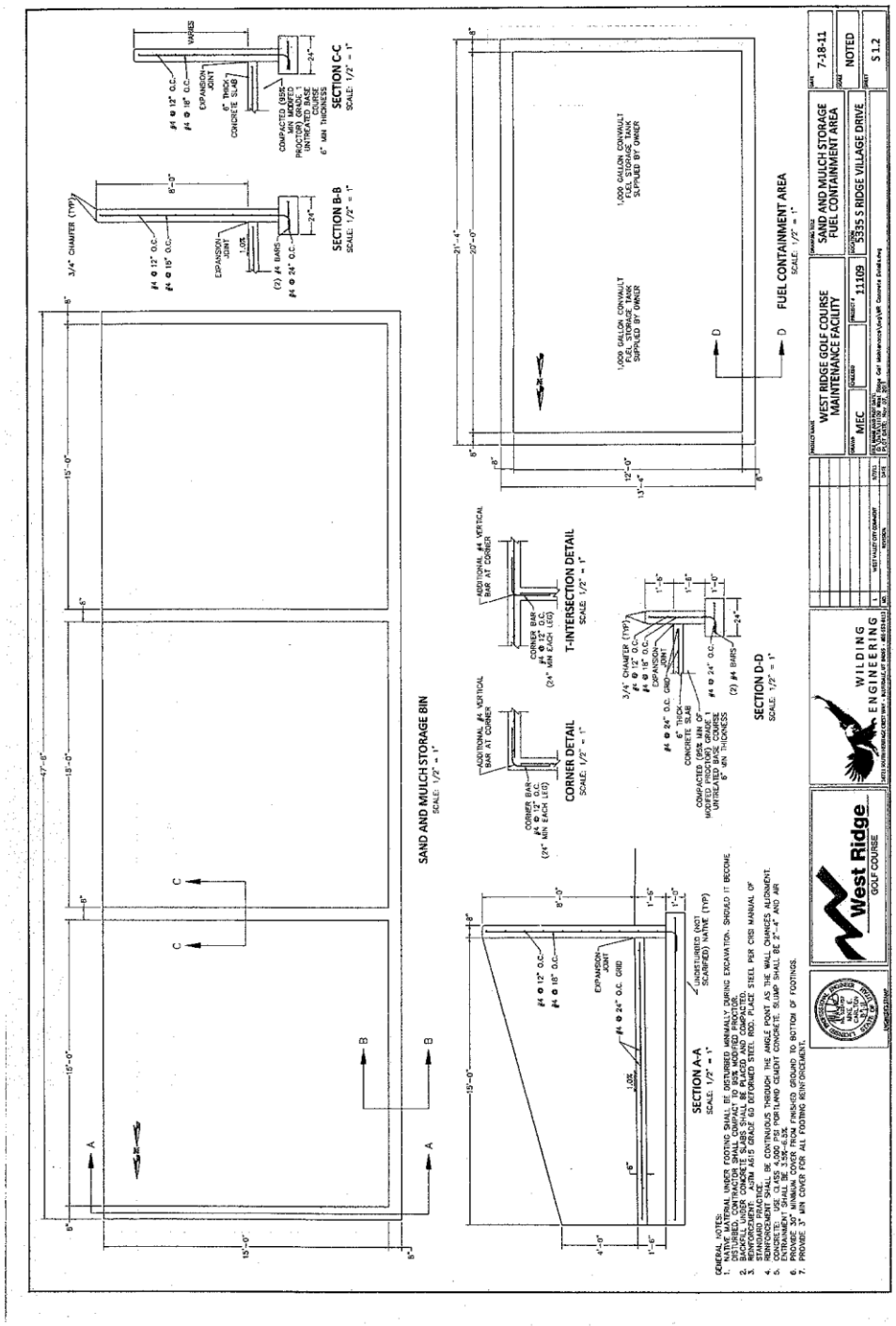
Restrooms located on golf course

1. All 3 restrooms have floor drains in the men's and women's bathrooms.
2. The driving range building has an additional floor drain in ball washing area.

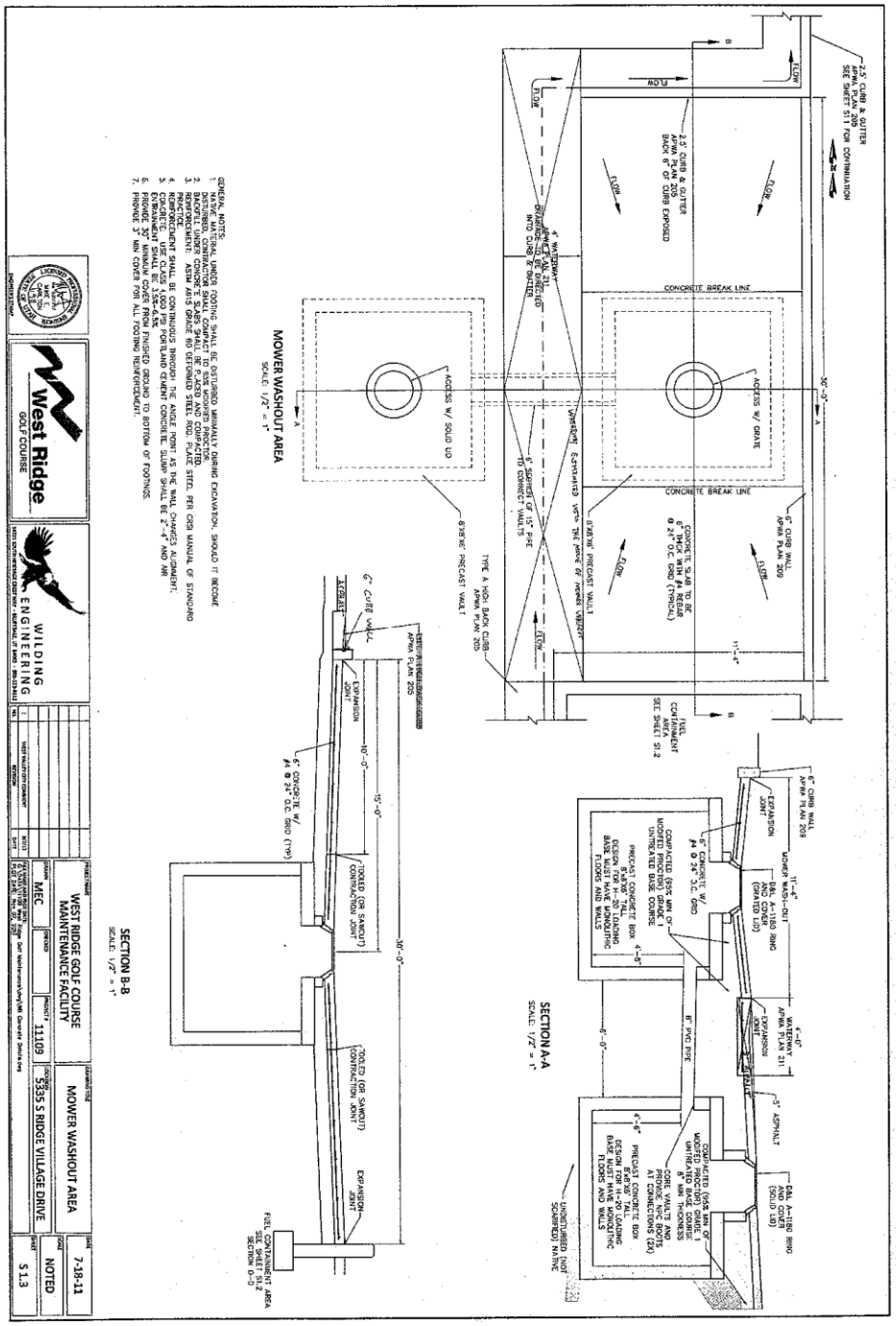
Ridge Storm Drains

1. Maintenance Parking lot
2. West Ridge Boulevard
3. 5600 West Overflow
4. Clubhouse Parking lot
5. 6400 West inlet
6. Mountain View Corridor inlet

The Ridge Golf Club



Ridge Maintenance Material Containment



Ridge Maintenance Washout Area

West Valley City
Parks and Recreation
Best Management Practices
Standard Operating Procedures

Objective: Onsite management of mowing, trimming, edging, debris removal and fertilizer and pesticide applications to provide a safe working environment and pollution free parks and golf courses.

Storm Water Training & Inspections

- Pollution preventions training for all parks personnel will be performed annually during the month of February. This training will also be part of orientation of new employees as well as rehired seasonal employees.
- Employees are supervised to ensure compliance.
- Sites are inspected weekly by qualified personnel.

Lawn Maintenance Activities

- Read manual if available. Become familiar with machine safety.

- Watch safety/training videos.

- Inspect mower before operating. Ensure all guards and shields are in place. Check for loose bolts/nuts and tighten if necessary. Do not make repairs or adjustment to mower while engine is running, unless owner's manual states otherwise.

- Eye and ear protection is provided and is requires that it be worn while operating any type of power equipment.

- Check the mower for presence of an enclosed canopy for head protection or ensure proper head protection be used.

- Check fluid levels before starting daily work and after lunch.

- Check area to be mowed and remove all trash, papers, bottles, rocks and other debris.

- When mowing, always make two to three passes around the outside, discharging clippings to the inside of the property being mowed.

- Always maintain a safe operating distance from people, at least 40 feet. If people are using the area you are mowing, mow around them, maintaining a safe distance, or ask them to move. **Always discharge clippings away from people.**

- After mowing, blow all grass clippings from walks and ensure curbs and gutters are cleaned of all grass clippings and dirt.

- Avoid hitting and damaging objects with mower by maintaining a safe distance between objects and mower. Be especially careful not to hit trees.

- When transporting, always ensure mower is fastened securely to trailer with chains and/or straps. Apply parking brake properly.

- Exercise extra care while mowing on slopes. Wear seat belts and ensure all safety systems are in place. Avoid sudden starts and stops on slopes. Do not park on slopes.

- Always refuel safely, follow refueling SOPs.

- Check for presence of a complete functioning spill kit

Edging procedure

- Before using:
    - Make sure you know whether edger is two stroke or four stroke
    - Check edger to ensure all guards and safety devices are properly installed and are not broken
    - Ensure all bolt, screws and fasteners are tight
    - Check fuel level and add as needed following refueling procedures
        - Use mixed fuel for two stroke edger
        - Use regular fuel for four stroke edger
    - Check oil level, if applicable
    - Check edger blade wear
    - Report any broken, missing or loose parts so they can be fixed before use
- During Use:
    - Safety glasses and ear plugs are required
    - Stay behind machine
    - Set blade depth to cut the edge between ¼ to ¾ of an inch deep
    - Stay next to sidewalks and curbs, trying to grind as little of the concrete as possible
    - Stop blade when changing from one area to another
    - Exercise extreme caution when edging around vehicles
    - Watch for sprinkler heads, do not cut them
    - Edges should be squared off to 90 degrees
    - Check blade for wear, replace when needed
    - Make sure edger is shut off before performing maintenance or repairs
    - Follow refueling procedures when refueling

- If you have any questions, please ask appropriate supervisor

Debris blowing procedure

- Before using:
    - Check blower to ensure all guards and safety devices are properly installed and are not broken
    - Ensure all bolt, screws and fasteners are tight
    - Check fuel level and add as needed following refueling procedures
    - Report any broken, missing or loose parts so they can be fixed before use
- During Use:
    - Safety glasses and ear plugs are required
    - Blow debris from sidewalks, cart paths, jogging paths, parking lots, and curb and gutters
        - Blow grass clippings and other green waste back onto turf
        - Pick up garbage
        - Ensure curb and gutters are clean to prevent any debris from entering the storm drain system
    - Exercise extreme caution when blowing around vehicles
    - Do not blow debris at people
    - Make sure blower is shut off before performing maintenance or repairs
    - Follow refueling procedures when refueling
- If you have any questions, please ask appropriate supervisor

Equipment Maintenance Activities

- Visually check equipment to ensure all safety equipment is functional.
- Check for leaks i.e. hydraulic, cooling, engine fluids or fuel daily.
- Read all applicable service manuals and develop service plans to ensure all service parts are replaced as to date and hours on the equipment.
- Make sure all hoses and related equipment are replaced when required by the service manual to reduce spills.
- Dispose of all fluids in a manner not to pollute storm water drainage or sewer system.
- Check that each applicable machine has a complete spill response kit.
- In the event of a spill the machine is to be put on a trailer and brought in to the repair shop rather spilling a containment on the ground all the way in. Unless the leak can be repaired in the field.

Vehicle and Equipment Cleaning

- Vehicles and equipment are to be washed on approved wash areas.

- Washed vehicles or equipment is never to be washed where water could enter the storm drain system or open water.

Chemical/Material Storage

- All fertilizer and pesticide containers are in designated area and in containment bins.
- Fertilizers and pesticides are to be used correctly as to the direction on product label.
- Liquid Formulations have containment bins to contain any size leaks.
- Granular formulations are to be swept and removed off paths and roadways.
- Never apply a product to adjacent waterways unless product label indicates that it is safe to do so.
- Fertilizer and pesticide applicators will be licensed or supervised directly by a licensed applicator.
- In the event of a spill the effected will be cleaned-treated as the label of the particular formulation requires.

Refueling Procedure

In areas with a fuel pump:

- Park next to appropriate pump
- Turn off engine
- While equipment is being refueled, stay where you can see nozzle.
- If a spill occurs, spread appropriate spill containment (located by pumps) to soak op the spill, and then dispose of properly.
- If spill occurs fill out spill report and turn in to supervisor

If refueling in a park or on a golf course using a gas can:

- If possible get to a hard surface such as a parking lot, sidewalk or cart path.
- Turn off engine.
- Use caution while refueling to ensure fuel does not spill.
- If spill occurs, spread appropriate spill containment (pad or calcined clay, located on the equipment or transport vehicle), and clean up as required.
- If spill occurs fill out spill report and turn in to supervisor.

Cleaning of garbage containers

- Garbage containers are to be washed out on an appropriate wash pad.

- Wash water is to be treated before entering sewer system.
- Wash water is never allowed to drain into storm drains

Proper Sediment/Erosion control

- Silt fences are to be employed to prevent soil from running into adjacent waterways during projects and when bare soil is present.

GOLF COURSE ACTIVITES

Description of Task	
Equipment maintenance	Daily
Irrigation Maintenance	Daily
Mowing	
Greens, Mowing	Daily
Greens, Verticut	Bi-weekly
Greens, Topdress	Monthly
Tees, Mowing	Daily
Tees, Topdress	Monthly
Fairways, Mowing	Daily
Fairways, Topdress	Annually
Roughs, Mowing	Daily
Golf Course Setup	
Cut Cups	Daily
Move Tee Markers	Daily
Trash, Ball Washers, Restrooms	Daily
Bunkers, Rake	Daily
Bunkers, Trim	Quarterly/as needed
Bunkers, Install Sand	Annually
Fertilization	
Greens	Quarterly/as needed
Tees	Quarterly
Fairways	Quarterly
Rough	Quarterly
Native Grass Areas	Never
Spraying	
Greens	As needed
Tees	As needed
Fairways	As needed

Roughs	As needed
Trees	As needed
Watering trees	As needed

Spill Prevention plan and clean up procedures

Spill Prevention - Materials and Waste Handling and Storage

- If possible, liquid or hazardous materials should be handled, used, stored, re-package and transferred indoors or under cover.
- Deliveries of bulk liquids should be supervised. Down gradient storm drain inlets should be covered during deliveries.
- Cover and contain containers, materials and wastes.
- Keep all containers closed unless adding or removing materials.

Spill Kit Maintenance

- Spill kits are located at the following locations: _WVC Parks Building, Westridge Maintenance Building and Stonebridge Maintenance Building and on/in equipment.
- Inspections of spill kit and re-supplying is done monthly

Gasoline or Diesel Spills

- Immediately stop
- Turn off engine
- Remove kit contents immediately put on latex gloves
- Assess nature of spill. Gasoline, diesel, oil, or anti-freeze
- Act quickly but safely, use absorbent pads and rolls to surround and contain spill.
- Contact Supervisor for appropriate pan, bucket, etc. to stop spill from reaching the containment pads.
- Dispose and decontaminate the area using containment bag in the kit and in compliance with local state and federal regulations. If necessary, decontaminate the spill site, personnel and equipment.
- Fill out the spill reporting form file with your supervisor

Hydraulic spill

- Immediately stop
- Turn off engine
- Remove kit contents immediately put on latex gloves
- Assess nature of spill.
- Act quickly but safely, use absorbent pads and rolls to surround and contain spill.
- Contact Supervisor for appropriate pan, bucket, etc. to stop spill from reaching the containment pads.
- If spill reaches soil dig up affected area. Dispose of soil appropriately.

Chemical spill

Granular application

- Clean up spills by sweeping, or blowing product into a pile and collecting
- Use on another property when possible
- Notify your supervisor
- Fill out a spill reporting after the clean up process

Liquid Spill

- Follow proper cleaning procedures using mats, absorbent material, and waddles to prevent spreading
- Dispose of properly
- Notify your supervisor
- Fill out a spill reporting form after the clean up process

Gas Storage tank leak

- Put waddles around storm drain**s**
- Cover storm drain
- Use absorbent pads and or calcified clay or other absorbent
- Dispose of absorbent properly

Spill Reporting Form
Storm Water Pollution Prevention Plan
West Valley City
Park Maintenance Division

Date _____________ Person Reporting Spill ________________________

Spill Location ____

Action(s) Taken ____

____

____

- -

Date _____________ Person Reporting Spill ________________________

Spill Location ____

Action(s) Taken ____

____

____

- -

Date _____________ Person Reporting Spill ________________________

Spill Location ____

Action(s) Taken ____

____

____

SPILL LOG
STORM WATER POLLUTION PREVENTION PLAN
WEST VALLEY CITY
PARKS AND GOLF COURSES

DATE	LOCATION	WHAT SPILLED	PROPERLY CONTAINED & CLEANED	MANAGER NOTIFIED

STORM WATER POLLUTION PREVENTION TRAINING
WEST VALLEY CITY
PARK MAINTENANCE DIVISON

Date	Name	Location	Type

Storm	

Water Activities	
Date	Activity

West Valley City
Parks and Recreation Department
Parks and Golf Courses Maintenance

Objective: On site management of potential pollutants as they relate to storm water contamination.

Table of Contents:

Section 1: Storm water protection plan
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Parks and Recreation
Golf Courses and Parks
Storm Water Management Plan

Objective: On site management of potential pollutants as they relate to storm water contamination.

Items of Concern:

1. Parking Lots
2. Maintenance Facility Parking Lots
3. Fertilizer and Pesticide Management
4. Disposal Food and Beverage Oils
5. Disposal of Engine Oils
6. Management of Grass clippings, Sand, and other Large Particulates.
7. Gasoline and Diesel
8. Waste Disposal
9. Training and Records

1) Parking Lots: Storm Water is collected in boxes throughout the Parking Areas. These are cleaned on a regular basis and or included a fabric cover to collect clippings and Parking lot residue.

2) Maintenance Facility Parking Lots: The Storm Water collected in these lots is in the same collection system as the Parking Lots. However, these lots are swept due to the amount of material in the lots associated with grounds maintenance. Fabric covers maybe employed in these areas.

3) Fertilizer and Pesticide Management: All Fertilizer and Pesticides used on the Golf Courses and Parks are stored in the Maintenance Facilities designated fertilizer and chemical storage room/area. Spill containment pallets are used for the following items: Granular and Liquid Fertilizers, Herbicides (selective and non-selective), Granular and Liquid Fungicides, all Paints (excluding Aerosols). Liquid spills are cleaned with sawdust and/or spill absorbents. Granular spills are collected and used on the golf course for turf grass nutritional purposes.

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5) Disposal on Engine Oil: Used oil is collected in the Maintenance Facilities in 55 gallon drums which are recycled by Emerald Recycling Company on an as-needed basis. Spills are cleaned with sawdust and oil absorbent materials.

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Storm Water Pollution Prevention Team Members and Resonsibilities
Stonebridge Golf Course

Name	Title	Description of Responsibilities
Matt Isbell	Golf Course Superintendent	Responsiible for all of the grounds department's materials, equipment and SWPPP compliance. Ensures that all chemicals, pesticides, herbicides and fertilizers are stored and dispensed in the correct manner. Maintains records on emploee certification and conducts job specific training with all golf course maintenance employees.
NA	Equipment Manager	Equipment Manager is charge of SWPPP compliance for equipment dept. Maintains inventory records and material disposal records for products such as: used batteries, used tires, oil, coolant, and hydraulic fluids. Also responsible for all housekeeping practices at the fleet facility.
Clark Garso	Head Golf Course Professional	Responsible for all of the Operations department's materials, equipment and SWPPP compliance. Ensures that all chemicals, cleaners, etc. are stored and dispensed in the correct manner. Maintains records on emploee certification and conducts job specific training with all golf course operations employees. Responsible for maintenance and cleaning of golf carts and disposal records for products such as: used batteries, used tires, oil, coolant, and hydraulic fluids. Responsible for all housekeeping practices at the pro shop.
Jeremy Erkilla	Food and Beverage Manager	Responsible for all of the Food and Beverage materials, equipment and SWPPP compliance. Ensures that all chemicals, cleaners, and cooking oils are stored and dispensed in the correct manner. Maintains records on emploee certification and conducts job specific training with all golf course maintenance employees. Responsible for all housekeeping practices in the café.

Contact List

Stonebridge Golf Course
4415 Links Dr.
West Valley City, Utah 84120

Golf Course Maintenance Superintendent
Matt Isbell 801 509-1961

Head Golf Professional
Clark Garso 801 957-9000

Food and Beverage Manager
Jeremy Erkilla 801 957-9000

Stonebridge Golf Course

4415 W. Links Drive
West Valley City, Utah 84120

Stonebridge is a 27 hole golf course. It sits on approximately 250 acres but has 180 acres of maintained turf and landscape beds. The excess area is lakes, canals and riparian areas.

- Stonebridge has 12,000 sq. ft clubhouse. This includes a proshop, café, full size kitchen, large banquet area, offices, and men's and ladies restrooms including locker rooms and golf cart storage area.
- Stonebridge Maintenance Building is located across Links Dr from Clubhouse. It is a 5000 sq. foot building that has 2 offices, break room, 2 restrooms, shower room, storage area, grinding room and pesticide storage room.
- Pumphouse #1 sits in clubhouse parking lot, this pumphouse generates water that goes in to canal system.
- Pumphouse #2 is across Lake Park Lake south east of the clubhouse. This pumphouse is for irrigating the golf course.
- 3 small restrooms on golf course

Stonebridge Maintenance Building
All floor drains go to sewer system

1. Ladies Restroom
2. Shower Room
3. Mens restroom
4. Main Shop South side in middle
5. Main Shop North side in middle

Restrooms located on golf course

1. Southwest restrooms have a floor drain in all three rooms.
2. South central restrooms have a floor drain all rooms.
3. Southeast restrooms have a floor drain in all three rooms

Stonebridge Storm Drains

1. 2 storm drains Maintenance/parking lot over flow
2. 1 Southeast corner
3. 1 Southwest corner
4. 1 Northeast corner
5. 1 North West corner
6. 1 West side middle
7. 1 East side middle

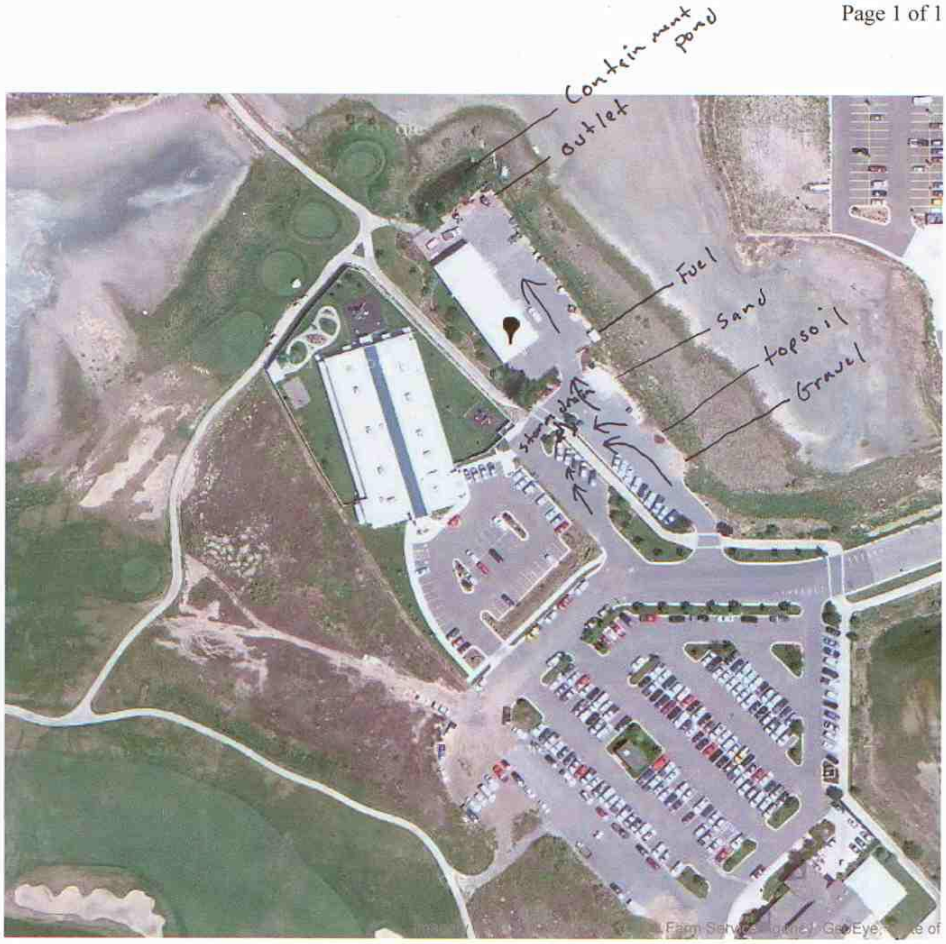
STONEBRIDGE GOLF COURSE

Stonebridge Golf Club

Legend

1. Maintenance Building
2. Pumphouse #1
3. Pumphouse #2
4. Southeast restroom
5. Central restroom
6. Southwest restroom

STONEBRIDGE MAINTENANCE BUILDING


Contain ment pond
outlet
Fuel
Sand
topsoil
Gravel

Mower Wash Area

100% Camera: 1,648 m 40°43'13"N 111°59'57"W 1,291 m

https://earth.google.com/web/@40.72008866,-111.99804679,1289.61132011a,358.32067974d,35y,359.80765742h,0t,0r 1/1

Stonebridge Golf Club
Best Management Practices
Standard Operating Procedures

Objective: Onsite management of mowing, trimming, edging, debris removal and fertilizer and pesticide applications to provide a safe working environment and pollution free parks and golf courses.

Storm Water Training & Inspections

- Pollution preventions training for all parks personnel will be performed annually during the month of February. This training will also be part of orientation of new employees as well as rehired seasonal employees.
- Employees are supervised to ensure compliance.
- Sites are inspected weekly by qualified personnel.

Lawn Maintenance Activities

- Read manual if available. Become familiar with machine safety.

- Watch safety/training videos.

- Inspect mower before operating. Ensure all guards and shields are in place. Check for loose bolts/nuts and tighten if necessary. Do not make repairs or adjustment to mower while engine is running, unless owner's manual states otherwise.

- Eye and ear protection is provided and is requires that it be worn while operating any type of power equipment.

- Check the mower for presence of an enclosed canopy for head protection or ensure proper head protection be used.

- Check fluid levels before starting daily work and after lunch.

- Check area to be mowed and remove all trash, papers, bottles, rocks and other debris.

- When mowing: always make two to three passes around the outside, discharging clippings to the inside of the property being mowed.

- Always maintain a safe operating distance from people, at least 40 feet. If people are using the area you are mowing, mow around them, maintaining a safe distance, or ask them to move. **Always discharge clippings away from people.**

- After mowing, blow all grass clippings from walks and ensure curbs and gutters are cleaned of all grass clippings and dirt.

- Avoid hitting and damaging objects with mower by maintaining a safe distance between objects and mower. Be especially careful not to hit trees.

- When transporting, always ensure mower is fastened securely to trailer with chains and/or straps. Apply parking brake properly.

- Exercise extra care while mowing on slopes. Wear seat belts and ensure all safety systems are in place. Avoid sudden starts and stops on slopes. Do not park on slopes.

- Always refuel safely, follow refueling SOPs.

- Check for presence of a complete functioning spill kit

Edging procedure

- Before using:
    - Make sure you know whether edger is two stroke or four stroke
    - Check edger to ensure all guards and safety devices are properly installed and are not broken
    - Ensure all bolt, screws and fasteners are tight
    - Check fuel level and add as needed following refueling procedures
        - Use mixed fuel for two stroke edger
        - Use regular fuel for four stroke edger
    - Check oil level, if applicable
    - Check edger blade wear
    - Report any broken, missing or loose parts so they can be fixed before use
- During Use:
    - Safety glasses and ear plugs are required
    - Stay behind machine
    - Set blade depth to cut the edge between ¼ to ¾ of an inch deep
    - Stay next to sidewalks and curbs, trying to grind as little of the concrete as possible
    - Stop blade when changing from one area to another
    - Exercise extreme caution when edging around vehicles
    - Watch for sprinkler heads, do not cut them
    - Edges should be squared off to 90 degrees
    - Check blade for wear, replace when needed
    - Make sure edger is shut off before performing maintenance or repairs
    - Follow refueling procedures when refueling
- If you have any questions, please ask appropriate supervisor

Debris blowing procedure

- Before using:
  - Check blower to ensure all guards and safety devices are properly installed and are not broken
  - Ensure all bolt, screws and fasteners are tight
  - Check fuel level and add as needed following refueling procedures
  - Report any broken, missing or loose parts so they can be fixed before use
- During Use:
  - Safety glasses and ear plugs are required
  - Blow debris from sidewalks, cart paths, jogging paths, parking lots, and curb and gutters
    - Blow grass clippings and other green waste back onto turf
    - Pick up garbage
    - Ensure curb and gutters are clean to prevent any debris from entering the storm drain system
  - Exercise extreme caution when blowing around vehicles
  - Do not blow debris at people
  - Make sure blower is shut off before performing maintenance or repairs
  - Follow refueling procedures when refueling
- If you have any questions, please ask appropriate supervisor

Equipment maintenance activities

- Visually check equipment to ensure all safety equipment is functional.
- Check for leaks i.e. hydraulic, cooling, engine fluids or fuel daily.
- Read all applicable service manuals and develop service plans to ensure all service parts are replaced as to date and hours on the equipment.
- Make sure all hoses and related equipment are replaced when required by the service manual to reduce spills.
- Dispose of all fluids in a manner not to pollute storm water drainage or sewer system.
- Check that each applicable machine has a complete spill response kit.
- In the event of a spill the machine is to be put on a trailer and brought in to the repair shop rather spilling a containment on the ground all the way in. Unless the leak can be repaired in the field.

Vehicle and Equipment Cleaning

- Vehicles and equipment are to be washed on grassed driving range tee.

- Washed vehicles or equipment is never to be washed where water could enter the storm drain system or open water.

Chemical/Material Storage

- All fertilizer and pesticide containers are in designated area and in containment bins.
- Fertilizers and pesticides are to be used correctly as to the direction on product label.
- Liquid Formulations have containment bins to contain any size leaks.
- Granular formulations are to be swept and removed off paths and roadways.
- Never apply a product to adjacent waterways unless product label indicates that it is safe to do so.
- Fertilizer and pesticide applicators will be licensed or supervised directly by a licensed applicator.
- In the event of a spill the effected will be cleaned-treated as the label of the particular formulation requires.

Refueling Procedure

In areas with a fuel pump:

- Park next to appropriate pump
- Turn off engine
- While equipment is being refueled, stay where you can see nozzle.
- If a spill occurs, spread appropriate spill containment (located by pumps) to soak op the spill, and then dispose of properly.
- If spill occurs fill out spill report and turn in to supervisor

If refueling in a park or on a golf course using a gas can:

- If possible get to a hard surface such as a parking lot, sidewalk or cart path.
- Turn off engine.
- Use caution while refueling to ensure fuel does not spill.
- If spill occurs, spread appropriate spill containment (pad or calcined clay, located on the equipment or transport vehicle), and clean up as required.
- If spill occurs fill out spill report and turn in to supervisor.

Cleaning of garbage containers

- Garbage containers are to be washed out on an appropriate wash pad.
- Wash water is to be treated before entering sewer system.
- Wash water is never allowed to drain into storm drains

Proper Sediment/Erosion control

- Silt fences are to be employed to prevent soil from running into adjacent waterways during projects and when bare soil is present.

GOLF COURSE ACTIVITES

Description of Task

Equipment maintenance	Daily
Irrigation Maintenance	Daily

Mowing

Greens, Mowing	Daily
Greens, Verticut	Bi-weekly
Greens, Topdress	Monthly
Tees, Mowing	Daily
Tees, Topdress	Monthly
Fairways, Mowing	Daily
Fairways, Topdress	Annually
Roughs, Mowing	Daily

Golf Course Setup

Cut Cups	Daily
Move Tee Markers	Daily
Trash, Ball Washers, Restrooms	Daily
Bunkers, Rake	Daily
Bunkers, Trim	Quarterly/as-needed
Bunkers, Install Sand	Annually

Fertilization

Greens	Quarterly/as-needed
Tees	Quarterly
Fairways	Quarterly
Rough	Quarterly
Native Grass Areas	Never

Spraying

Greens	As-needed
Tees	As-needed
Fairways	As-needed
Roughs	As-needed
Trees	As-needed
Watering trees	As-needed

Spill Prevention plan and clean up procedures

Spill Prevention - Materials and Waste Handling and Storage

- If possible, liquid or hazardous materials should be handled, used, stored, re-package and transferred indoors or under cover.
- Deliveries of bulk liquids should be supervised. Down gradient storm drain inlets should be covered during deliveries.
- Cover and contain containers, materials and wastes.
- Keep all containers closed unless adding or removing materials.

Spill Kit Maintenance

- Spill kits are located at the following locations: _WVC Parks Building, Westridge Maintenance Building and Stonebridge Maintenance Building and on/in equipment.
- Inspections of spill kit and re-supplying is done monthly

Gasoline or Diesel Spills

- Immediately stop
- Turn off engine
- Remove kit contents immediately put on latex gloves
- Assess nature of spill. Gasoline, diesel, oil, or anti-freeze
- Act quickly but safely, use absorbent pads and rolls to surround and contain spill.
- Contact Supervisor for appropriate pan, bucket, etc. to stop spill from reaching the containment pads.
- Dispose and decontaminate the area using containment bag in the kit and in compliance with local state and federal regulations. If necessary decontaminate the spill site, personnel and equipment.
- Fill out the spill reporting form file with your supervisor

Hydraulic spill

- Immediately stop
- Turn off engine
- Remove kit contents immediately put on latex gloves
- Assess nature of spill.
- Act quickly but safely, use absorbent pads and rolls to surround and contain spill.
- Contact Supervisor for appropriate pan, bucket, etc. to stop spill from reaching the containment pads.
- If spill reaches soil dig up affected area. Dispose of soil appropriately.

Chemical spill

Granular application

- Clean up spills by sweeping, or blowing product into a pile and collecting
- Use on another property when possible
- Notify your supervisor
- Fill out a spill reporting after the clean up process

Liquid Spill

- Follow proper cleaning procedures using mats, absorbent material, and waddles to prevent spreading
- Dispose of properly
- Notify your supervisor
- Fill out a spill reporting form after the clean up process

Gas Storage tank leak

- Put waddles around storm drain**s**
- Cover storm drain
- Use absorbent pads and or calcified clay or other absorbent
- Dispose of absorbent properly

Spill Reporting Form
Storm Water Pollution Prevention Plan
West Valley City
Park Maintenance Division

Date ______________ Person Reporting Spill _________________________

Spill Location ____

Action(s) Taken ____

____

____

- -

Date ______________ Person Reporting Spill _________________________

Spill Location ____

Action(s) Taken ____

____

____

- -

Date ______________ Person Reporting Spill _________________________

Spill Location ____

Action(s) Taken ____

____

____

SPILL LOG
STORM WATER POLLUTION PREVENTION PLAN
WEST VALLEY CITY
PARKS AND GOLF COURSES

DATE	LOCATION	WHAT SPILLED	PROPERLY CONTAINED & CLEANED	MANAGER NOTIFIED

STORM WATER POLLUTION PREVENTION TRAINING
WEST VALLEY CITY
PARK MAINTENANCE DIVISON

Date	Name	Location	Type

Storm water Check List

Check Drains sand	Check Sand Bags	Check for containers outside	check spill kits	date

EXHIBIT A

Parcel Number 15-29-202-015-0000

EXHIBIT B

Stormwater Pollution Prevention Plan

for:

West Valley City Public Works, Operations and Fleet Maintenance Facility
2805 S 3600 W
West Valley City, Utah 84119

PURPOSE AND RESPONSIBILTY

As required by the Clean Water Act and resultant local regulations, including West Valley City Municipal Separate Storm Sewer Systems (MS4) Permit, those who develop land are required to build and maintain systems to minimize litter and contaminants in stormwater runoff that pollute waters of the State.

This Stormwater Pollution Prevention Plan (SWPPP) describes the systems, operations and the minimum standard operating procedures (SOPs) necessary to manage pollutants originating from or generated on this property. Any activities or site operations at this property that contaminate water entering the City's stormwater system and generate loose litter must be prohibited, unless SOPs are written to manage those activities or operations, and amended into this SWPPP.

The Jordan River is impaired but does not have a TMDL. The SWPPP is aimed at addressing these impairments in addition to all other pollutants that can be generated by this property.

CONTENTS

SECTION 1: SITE DESCRIPTION, USE AND IMPACT
SECTION 2: TRAINING
SECTION 3: RECORDKEEPING
SECTION 4 APPENDICES

SECTION 1: SITE DESCRIPTION, USE AND IMPACT

The site infrastructure at our site is limited at controlling and containing pollutants and our operations if managed improperly can contaminate the environment. This SWPPP includes standard operations procedures (SOP)s that are intended to compensate for the pollution containment limitations of our site infrastructure and direct our maintenance operations to responsibly manage our grounds.

Parking, Sidewalk and flatwork

Any sediment, leaves, debris, spilt fluids or other waste that collects on our parking lots and sidewalks will be swept up and deposited in our solid waste/sweeping containment bin, anything that isn't swept up will be carried by runoff to our storm drain inlets. This waste material will settle in our storm drain system increasing maintenance cost and solid and dissolved waste in our runoff is contained in our system which includes a series of sediment catch boxes and a retention pond before entering a split box with flow control to stop any missed contaminants before leaving our site. If they get past our onsite containment, they can ultimately make it to the Jordan River. Maintenance involves regular sweeping of our pavements and cleaning of our storm drain system when necessary.

Landscaping

Our landscape operations can result in grass clippings, sticks, branches, dirt, mulch, fertilizers, pesticides and other pollutants to fall or be left on our paved areas. This waste material will settle in our storm drain system increasing maintenance cost and solid and dissolved waste in our runoff can pass through our storm drain system ultimately polluting Jordan River. The primary pollutant impairing the Jordan River is organic material so it is vital that our paved areas with direct connection to the City storm drain systems remain clean of landscape debris.

Storm Drain System

The storm drain inlets with higher risk of contaminates direct all runoff to a detention pond and through a stormwater treatment unit that is designed to allow all floatable material to stay on the surface of the detention basin and allow water to flow through the ground and out through an outfall which can be closed in case of a hazardous spill. This device is able to be bypassed during large storm events and the dissolved pollutants will pass through and harm the Jordan River. Also our stormwater treatment system has the potential to hold water at times which could provide an environment for mosquitos to breed. It is important to regularly maintain this system to protect the Jordan River and prevent mosquito breeding. Use our Storm Drain Maintenance SOP manage our storm drain system responsibly.

Waste Management

Our 6-yard dumpster and trash receptacles with lids are intended to prevent precipitation exposure minimizing liquids that can leak to pavements and from haul trucks.. Lids will also prevent the lightweight trash carried off by wind. There is an additional 30 yard open top dumpster that is used for large items. Debris will be kept under the top rim of the dumpster to prevent any risk of debris being blown out due to wind. Good waste management systems, if managed improperly, can become the source of the very pollution that they were intended to control.

Our sweepings containment bin is used for large objects which do not fit in our standard dumpster. This bin has 8 foot high concrete walls, a roof overhead and a containment bump to minimize and hopefully prevent any pollution caused by wind and/or rain.

Utility System

Our roof top and ground level utility system are exposed to our roof drains and parking lot drain boxes which drain to our pavements. These heating and air conditioner units contains oils and other chemicals that can harm the Jordan River if allowed to drain off our property. Liquids and other waste generated by maintenance of this system can be appropriately managed by our Spill Response/Containment SOP.

Snow and Ice Removal Management

Salt is a necessary pollutant and is vital to ensuring a safe parking and pedestrian walkways. However, the snow removal operations if improperly managed will increase our salt impact to our own vegetation and local water resources. Use our Snow and Ice Removal SOP to minimize our salt impact.

This containment bin has a metal roof and can hold a maximum of 2000 tons of salt used for de-icing roads. The area directly in front of this containment bin is swept daily (weather permitting).

Equipment / Outside Storage

c

Slurry Operations Containment Area

This area is located along the South wall of the property. This area is where a tank trailer with a capacity of 4,100 gallons used for slurry oil, an extra thick wall tank with a capacity of 3,000 gallons used for Aluminum Sulfate are stored. This area is bedded with a gravel filter which absorbs and contains any spilled products. This area also has a containment bump in the front of it as a second line of defense to contain any runoff.

Asphalt Equipment Washout Containment Bin (Hydrocarbon Bin)

This containment bin is located along the South wall of the property. This area is used for washing all asphalt and slurry equipment. The floor of this bin drains to a box in the Southwest corner of the containment bin which drains to the sanitary sewer. The drain box grate is protected by either oil absorbent socks or gravel bags. The floor is covered with a gravel filter which absorbs any oil and asphalt material. This gravel filter media is hauled away and disposed of as per SOP when necessary. This containment bin has 8 foot high concrete walls and a metal roof to protect from wind/rain runoff.

Slurry Sand Containment Area

This area is located along the South wall of the property. It has 8 foot high concrete walls. Sand will be kept pushed within containment area to prevent water runoff.

Salt Equipment Storage Racks

There are two locations where salt insert sanders and plows will be stored. A hanging rack directly South of the Salt Containment Bin will be used for 5 salter/plow combos. The second location of hanging racks will be directly South of the Fuel Tank. This hanging rack will be used for 8 salter/plow combos. This area will be deep cleaned as a part of the semi-annual deep cleaning schedule.

Fuel Station/Tank Area

This facility has three fuel pumps which have 2 dispensers per pump. One pump for gasoline and two pumps for diesel. This fuel station is covered. These pumps are owned and maintained by West Valley City. The fuel tank is an above ground unit which holds 10,900 gallons of diesel fuel and 10,900 gallons of gasoline. The fuel tank is located along the East wall of the property and is surrounded by 3 concrete walls and has bollards placed in front of the unit to protect it from vehicles/equipment. A bin filled with absorbent is placed at each fuel pump. The absorbent bin contents are checked by the Storm Water Maintenance Supervisor at least once a month as part of the monthly site inspection.

All reported spills are recorded on Cityworks and cleaned up as per our Spill Response/Containment SOP.

Sweepings/Vactor Solids Containment Bin

This area is located along the South wall of the property. It has 8 foot high concrete wall, a metal roof and a containment bump to minimize any wind/rain runoff pollution. The contents of this bin are results from our street sweepings program. Once bin is full, the contents are then loaded into dump trucks and hauled off to the landfill for disposal. A copy of all weight receipts from sweepings hauled are kept by the Storm Water Maintenance Supervisor. These actions are covered with each activity SOP's.

Equipment Washout/Dewatering Area

This area is located along the South wall of the property. It has 8 foot high concrete walls and a metal roof to minimize any wind/rain runoff. The floor of this area slopes to the back and into two drain boxes which go to the sanitary sewer. The grates in this area are protected by gravel socks to only allow water to drain. There are 4 yard hydrants and a large water fill valve used for cleaning equipment. This area will be swept daily, weather permitting. These actions are covered with each activity SOP's.

SECTION 2: TRAINING

Ensure that all employees and maintenance contractors know and understand the SOPs specifically written to manage and maintain the property. Maintenance contractors must use the stronger of their Company and the SWPPP SOPs. Training is to be done annually along with our Snow Removal training. Training summary and attendance log to be kept by Storm Water Maintenance Supervisor.

SECTION 3: RECORDKEEPING

All maintenance records will be kept on our Cityworks database.

SECTION 4: APPENDICES

Appendix A- Site Drawings and Details
Appendix B- SOPs

APPENDIX A – SITE DRAWINGS AND DETAILS

MAINTENANCE/INSPECTION SCHEDULE

Frequency	Site Infrastructure.
M	Full site inspection done by Storm Water Maintenance Supervisor. Records on Cityworks.
B	Full site inspection done by Storm Water Maintenance Supervisor and Engineering Storm Water Inspector. Records on Citworks
A	Observe outfall from site and take water sample to check for oil/solid pollutants. Records on Cityworks.
S	Inspection of Salt Brine Containment Area and water sample taken to determine if it is safe to be drained. Records on Cityworks.

Inspection Frequency Key: A=annual, B=bi-annually, M=monthly, S=following appreciable storm event, U=Unique infrastructure specific (specify)

RECORD INSPECTIONS IN THE MAINTENANCE LOG

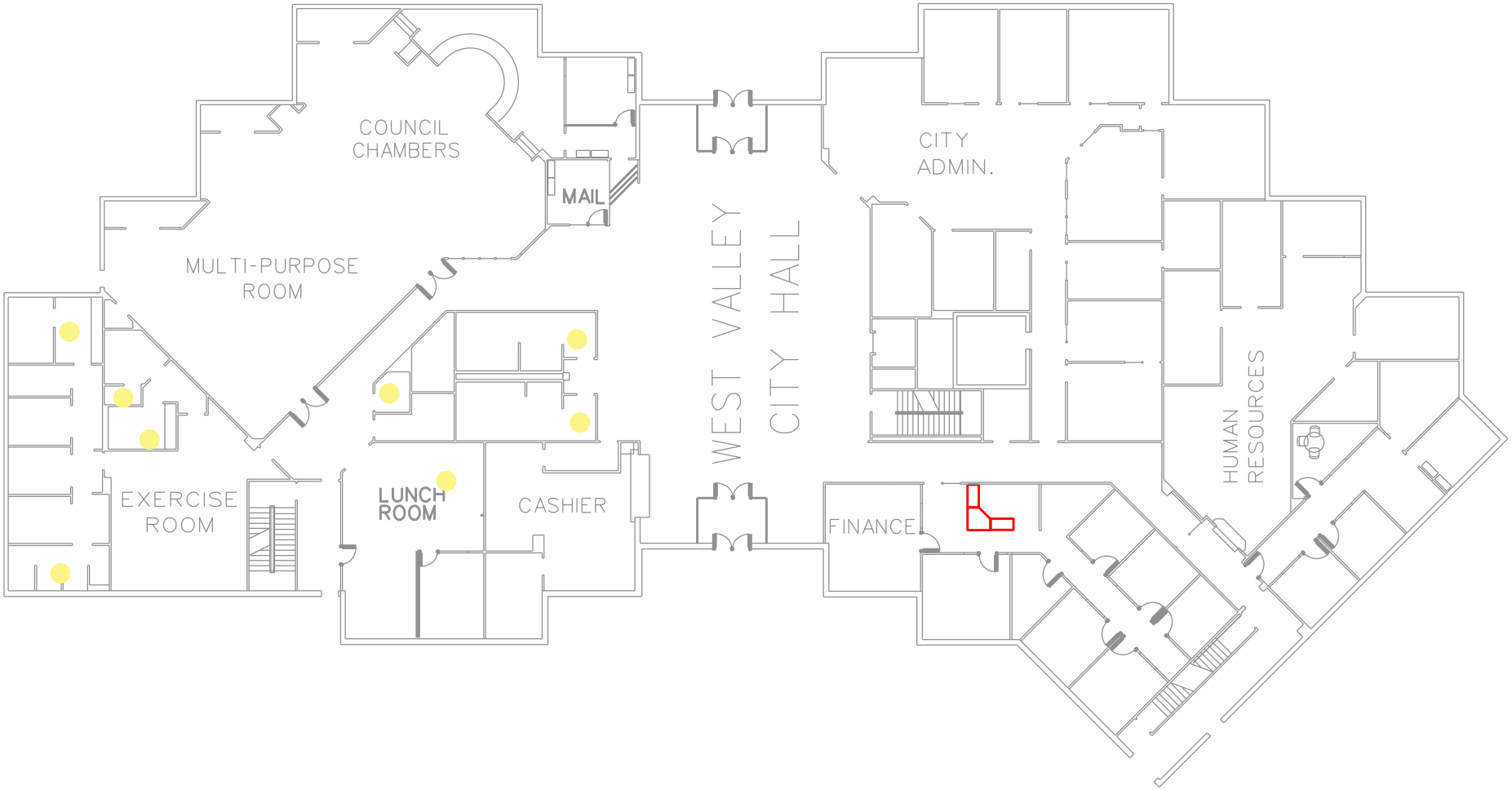
Inspection Means: Either; Traditional walk through, Awareness/Observation, and during regular maintenance operations while noting efficiencies/inefficiencies/concerns found, etc. All maintenance records/inspections are kept on our Cityworks database.

MAINTENANCE LOG

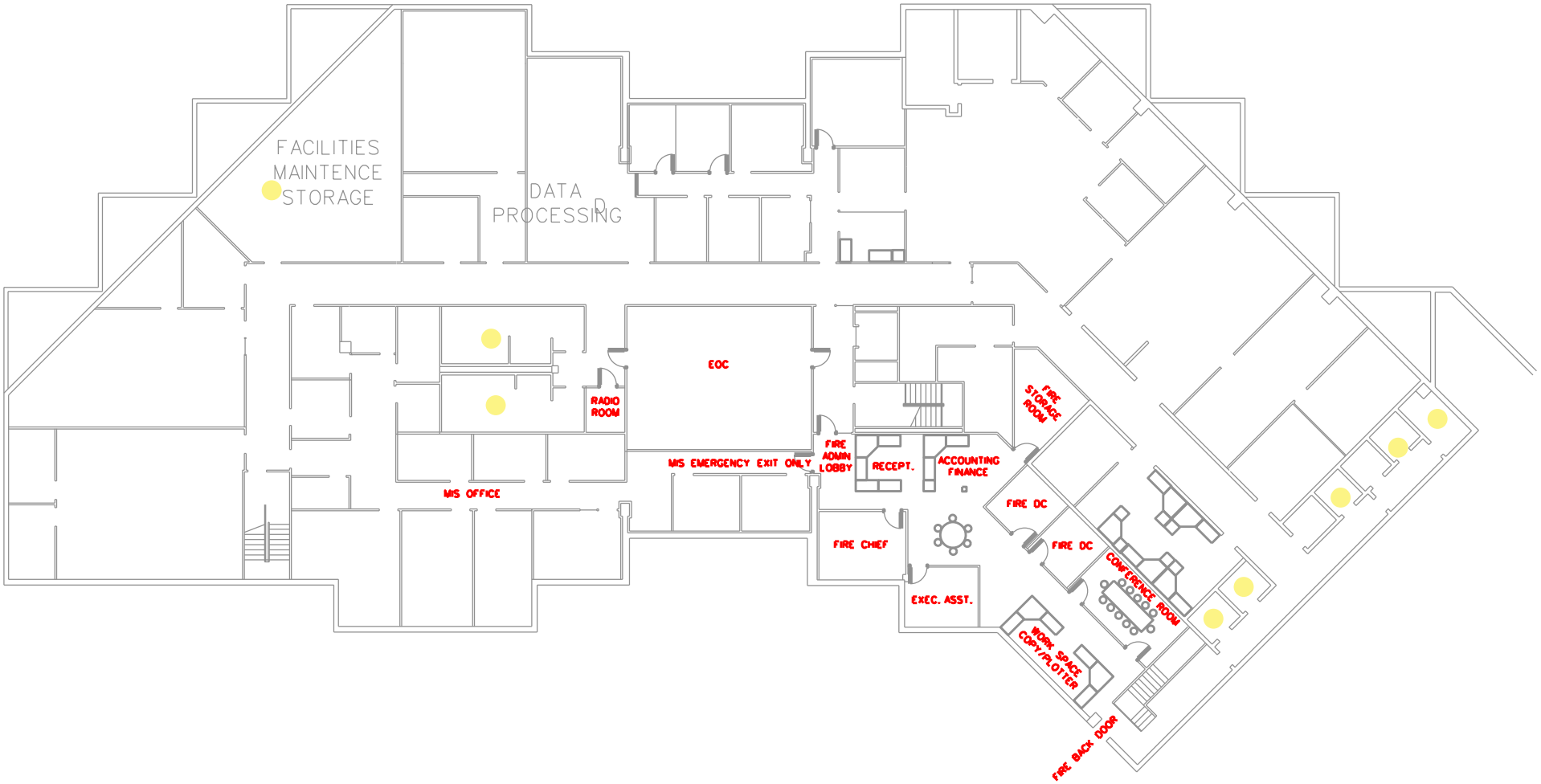
All Maintenance records are kept on our Cityworks database.

TRAINING LOG

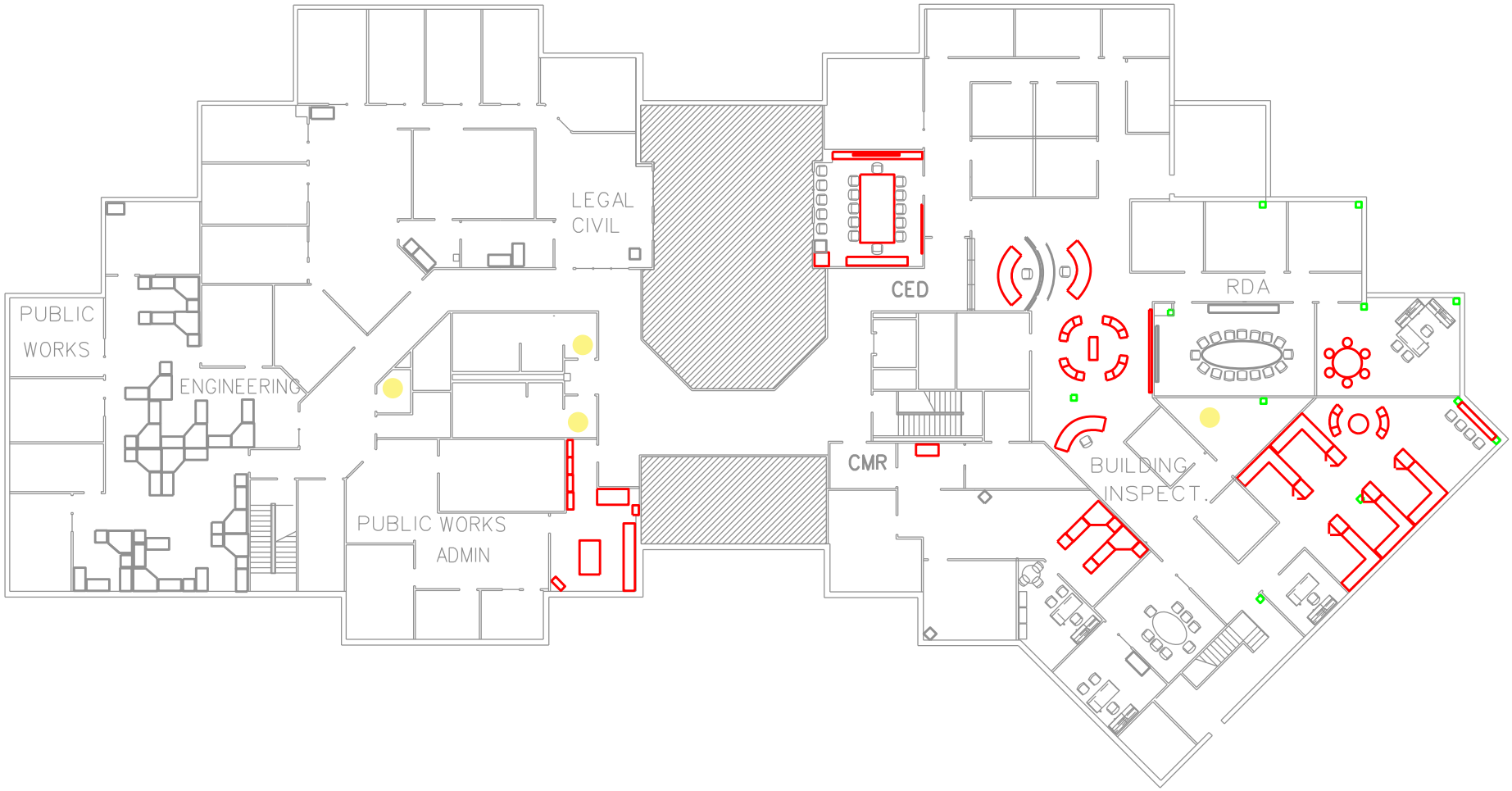
A summary of training topics as well as attendance log for annual training will be kept with Storm Water Maintenance Supervisor.


COUNCIL CHAMBERS
MAIL
MULTI-PURPOSE ROOM
EXERCISE ROOM
LUNCH ROOM
CASHIER
WEST VALLEY CITY HALL
CITY ADMIN.
FINANCE
HUMAN RESOURCES

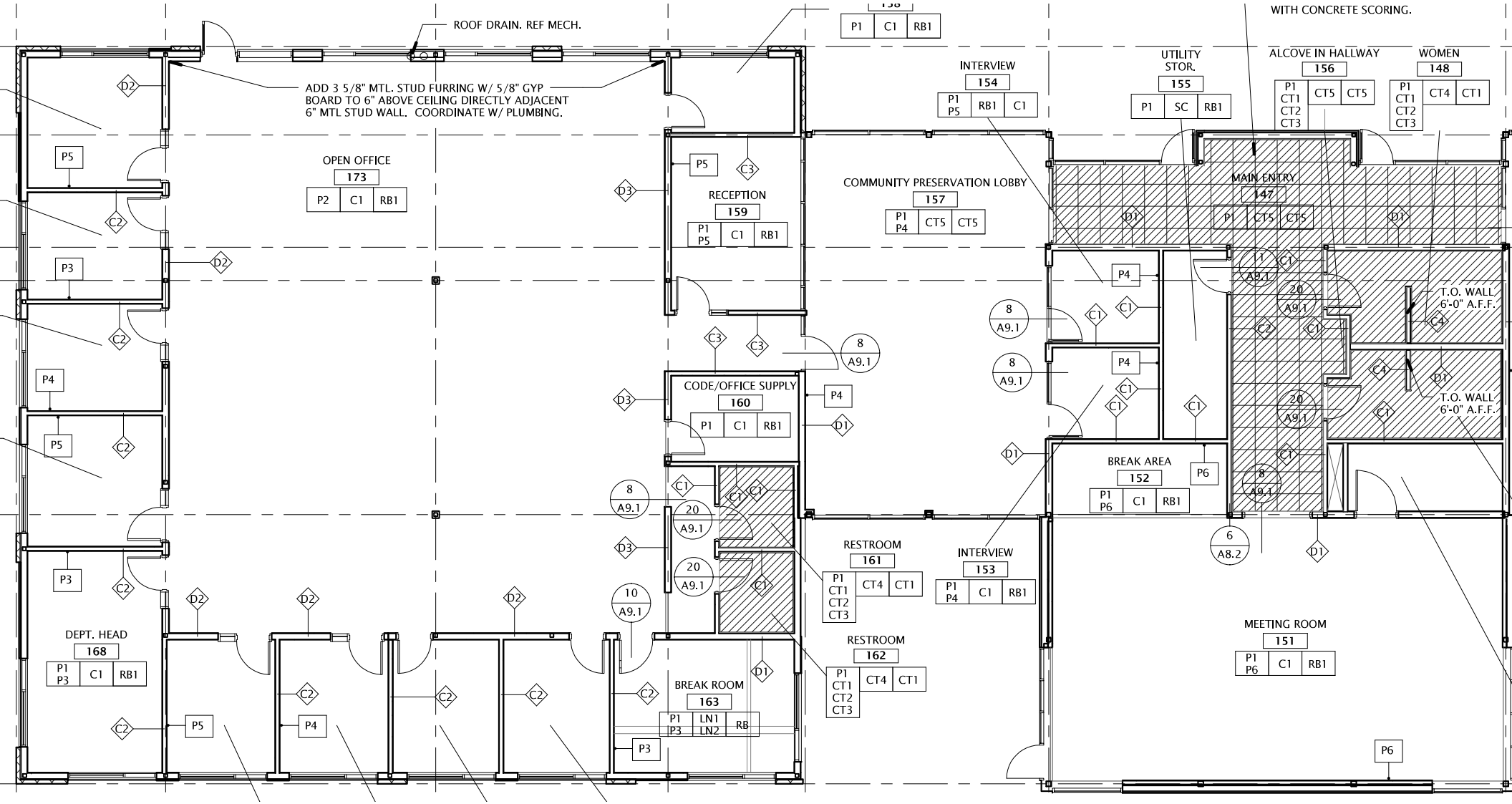
MAIN FLOOR

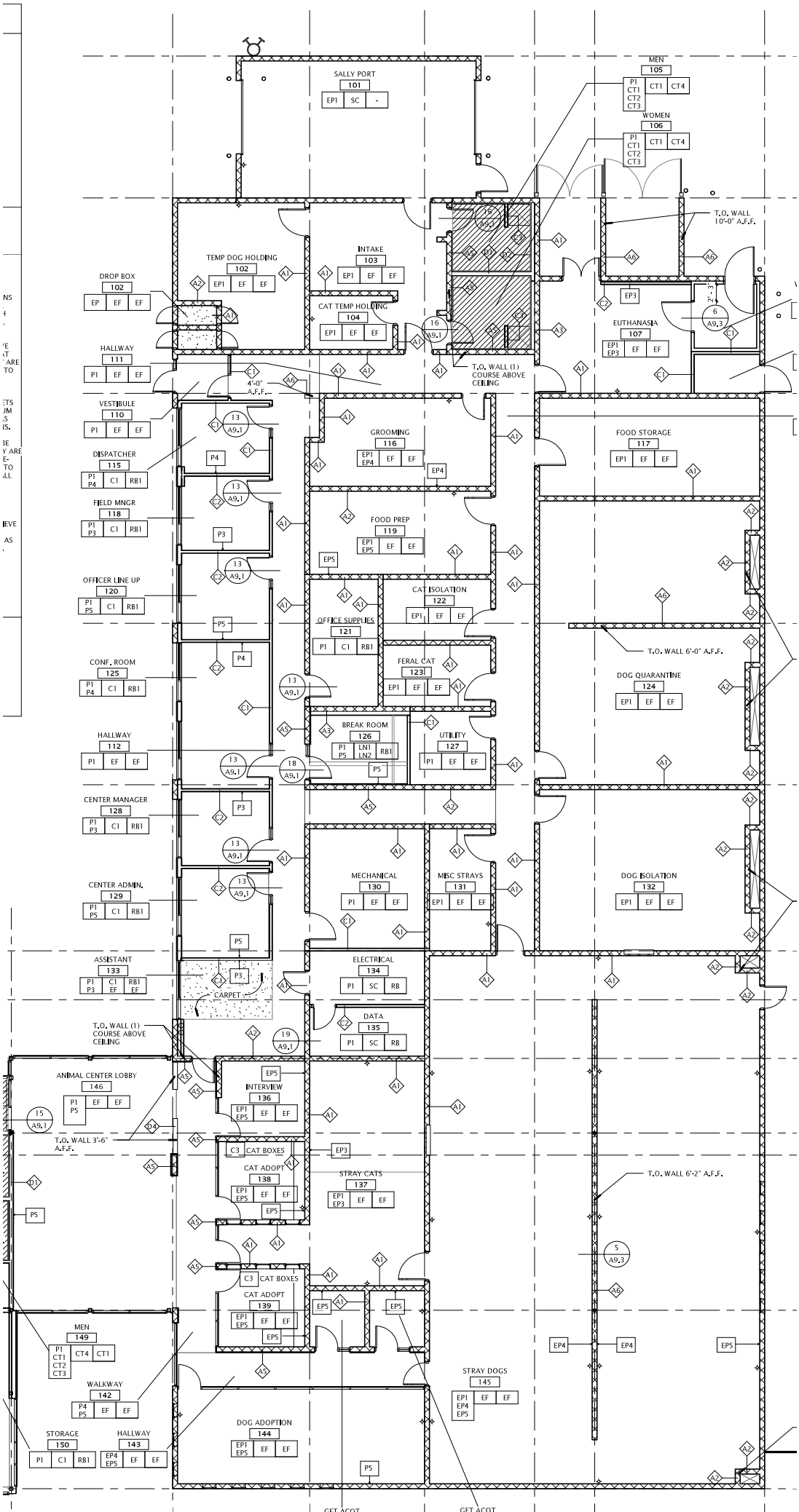

FACILITIES
MAINTENCE
STORAGE
DATA
PROCESSING
EOC
RADIO
ROOM
MIS OFFICE
MIS EMERGENCY EXIT ONLY
FIRE
ADMIN
LOBBY
RECEPT.
ACCOUNTING
FINANCE
FIRE
STORAGE
ROOM
FIRE DC
FIRE DC
FIRE CHIEF
EXEC. ASST.
CONFERENCE ROOM
WORK SPACE
COPY/PLOTTER
FIRE BACK DOOR

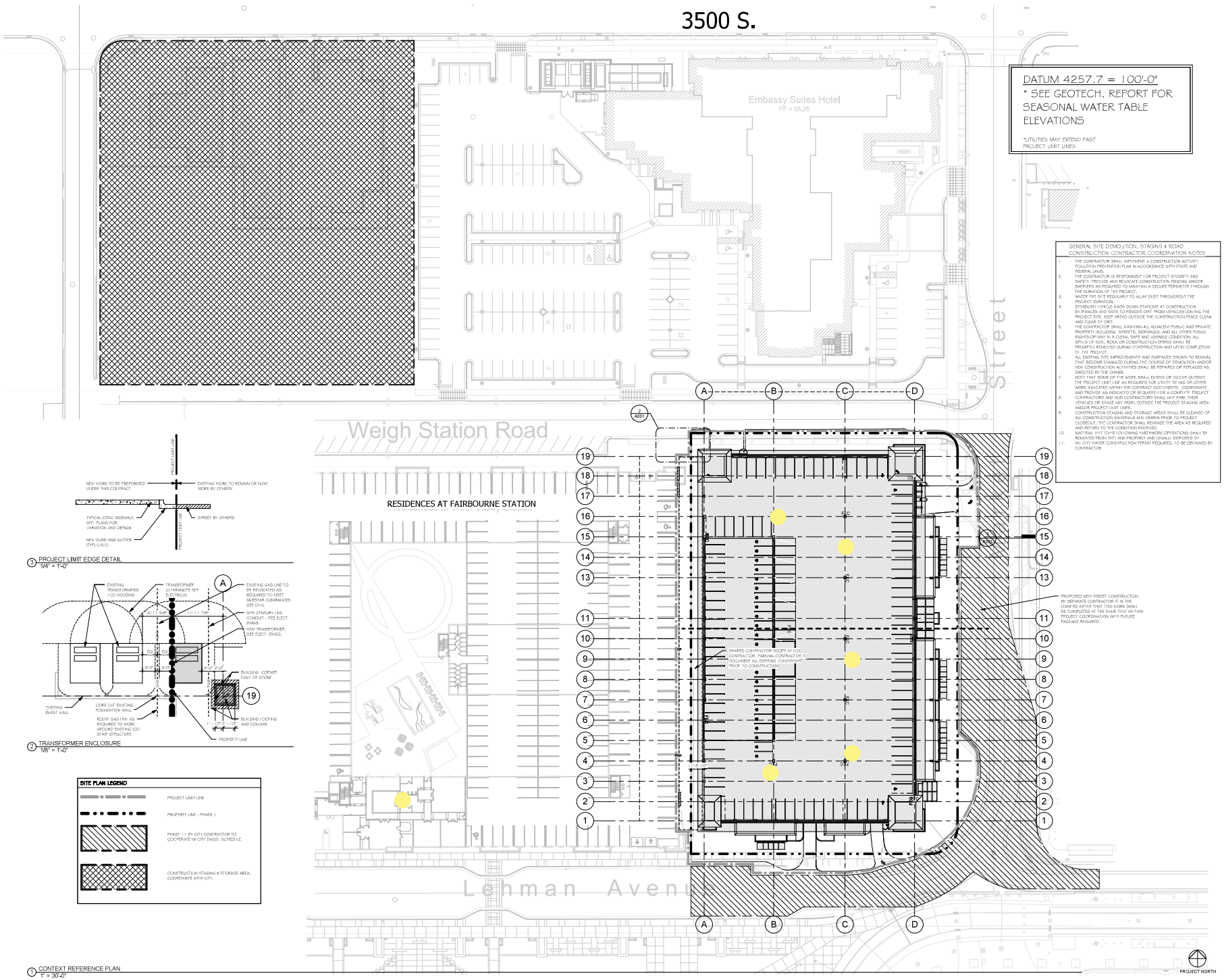
BASEMENT



SECOND FLOOR


ROOF DRAIN. REF MECH.
ADD 3 5/8" MTL. STUD FURRING W/ 5/8" GYP BOARD TO 6" ABOVE CEILING DIRECTLY ADJACENT 6" MTL STUD WALL. COORDINATE W/ PLUMBING.
OPEN OFFICE
173
P2 C1 RB1
RECEPTION
159
P1 P5 C1 RB1
CODE/OFFICE SUPPLY
160
P1 C1 RB1
DEPT. HEAD
168
P1 P3 C1 RB1
BREAK ROOM
163
P1 P3 LN1 LN2 RB
RESTROOM
161
P1 CT1 CT2 CT3 CT4 CT1
RESTROOM
162
P1 CT1 CT2 CT3 CT4 CT1
COMMUNITY PRESERVATION LOBBY
157
P1 P4 CT5 CT5
INTERVIEW
154
P1 P5 RB1 C1
INTERVIEW
153
P1 P4 C1 RB1
BREAK AREA
152
P1 P6 C1 RB1
MEETING ROOM
151
P1 P6 C1 RB1
UTILITY STOR.
155
P1 SC RB1
ALCOVE IN HALLWAY
156
P1 CT1 CT2 CT3 CT5 CT5
WOMEN
148
P1 CT1 CT2 CT3 CT4 CT1
MAIN ENTRY
147
P1 CT5 CT5
WITH CONCRETE SCORING.
T.O. WALL 6'-0" A.F.F.
T.O. WALL 6'-0" A.F.F.


SALLY PORT
101
EP1 SC -
MEN
105
P1 CT1 CT2 CT3 CT1 CT4
WOMEN
106
P1 CT1 CT2 CT3 CT1 CT4
T.O. WALL 10'-0" A.F.F.
TEMP DOG HOLDING
102
EP1 EF EF
INTAKE
103
EP1 EF EF
DROP BOX
102
EP EF EF
CAT TEMP HOLDING
104
EP1 EF EF
EUTHANASIA
107
EP1 EP3 EF EF
HALLWAY
111
P1 EF EF
T.O. WALL (1) COURSE ABOVE CEILING
4'-0" A.F.F.
VESTIBULE
110
P1 EF EF
GROOMING
116
EP1 EP4 EF EF
FOOD STORAGE
117
EP1 EF EF
DISPATCHER
115
P1 P4 C1 RB1
FIELD MNGR
118
P1 P3 C1 RB1
FOOD PREP
119
EP1 EP5 EF EF
OFFICER LINE UP
120
P1 P5 C1 RB1
CAT ISOLATION
122
EP1 EF EF
OFFICE SUPPLIES
121
P1 C1 RB1
T.O. WALL 6'-0" A.F.F.
CONF. ROOM
125
P1 P4 C1 RB1
FERAL CAT
123
EP1 EF EF
DOG QUARANTINE
124
EP1 EF EF
HALLWAY
112
P1 EF EF
BREAK ROOM
126
P1 P5 LN1 LN2 RB1
UTILITY
127
P1 EF EF
CENTER MANAGER
128
P1 P3 C1 RB1
MECHANICAL
130
P1 EF EF
MISC STRAYS
131
EP1 EF EF
DOG ISOLATION
132
EP1 EF EF
CENTER ADMIN.
129
P1 P5 C1 RB1
ELECTRICAL
134
P1 SC RB
ASSISTANT
133
P1 P3 C1 EF RB1 EF
CARPET
DATA
135
P1 SC RB
T.O. WALL (1) COURSE ABOVE CEILING
ANIMAL CENTER LOBBY
146
P1 P5 EF EF
INTERVIEW
136
EP1 EP5 EF EF
T.O. WALL 3'-6" A.F.F.
C3 CAT BOXES
CAT ADOPT
138
EP1 EP5 EF EF
STRAY CATS
137
EP1 EP3 EF EF
T.O. WALL 6'-2" A.F.F.
C3 CAT BOXES
CAT ADOPT
139
EP1 EP5 EF EF
MEN
149
P1 CT1 CT2 CT3 CT4 CT1
WALKWAY
142
P4 P5 EF EF
STRAY DOGS
145
EP1 EP4 EP5 EF EF
STORAGE
150
P1 C1 RB1
HALLWAY
143
EP4 EP5 EF EF
DOG ADOPTION
144
EP1 EP5 EF EF
GET ACOT
GET ACOT



DATUM 4257.7 = 100'-0"
* SEE GEOTECH. REPORT FOR SEASONAL WATER TABLE ELEVATIONS

*UTILITIES MAY EXTEND PAST PROJECT LIMIT LINES

GENERAL SITE DEMOLITION, STAGING & ROAD CONSTRUCTION CONTRACTOR COORDINATION NOTES

1. THE CONTRACTOR SHALL IMPLEMENT A CONSTRUCTION ACTIVITY POLLUTION PREVENTION PLAN IN ACCORDANCE WITH STATE AND FEDERAL LAWS.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SECURITY AND SAFETY. PROVIDE AND RELOCATE CONSTRUCTION FENCING AND/OR BARRIERS AS REQUIRED TO MAINTAIN A SECURE PERIMETER THROUGH THE DURATION OF THE PROJECT.
3. WATER THE SITE REGULARLY TO ALLAY DUST THROUGHOUT THE PROJECT DURATION.
4. ESTABLISH VEHICLE WASH DOWN STATIONS AT CONSTRUCTION ENTRANCES AND EXITS TO REMOVE DIRT FROM VEHICLES LEAVING THE PROJECT SITE. KEEP AREAS OUTSIDE THE CONSTRUCTION FENCE CLEAN AND CLEAR OF DIRT.
5. THE CONTRACTOR SHALL MAINTAIN ALL ADJACENT PUBLIC AND PRIVATE PROPERTY INCLUDING STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT.
6. ALL EXISTING SITE IMPROVEMENTS AND SURFACES SHOWN TO REMAIN THAT BECOME DAMAGED DURING THE COURSE OF DEMOLITION AND/OR NEW CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER.
7. NOTE THAT SOME OF THE WORK SHALL EXTEND OR OCCUR OUTSIDE THE PROJECT LIMIT LINE AS REQUIRED FOR UTILITY TIE-INS OR OTHER WORK INDICATED WITHIN THE CONTRACT DOCUMENTS. COORDINATE AND PROVIDE AS INDICATED OR REQUIRED FOR A COMPLETE PROJECT. CONTRACTORS AND SUB CONTRACTORS SHALL NOT PARK THEIR VEHICLES OR STAGE ANY WORK OUTSIDE THE PROJECT STAGING AREA AND/OR PROJECT LIMIT LINES.
8. CONSTRUCTION STAGING AND STORAGE AREAS SHALL BE CLEANED OF ALL CONSTRUCTION MATERIALS AND DEBRIS PRIOR TO PROJECT CLOSEOUT. THE CONTRACTOR SHALL REGRADE THE AREA AS REQUIRED AND RETURN TO THE CONDITION RECEIVED.
9. MATERIAL LEFT OVER FROM LONING FARTHWORK OPERATIONS SHALL BE REMOVED FROM SITE AND PROPERLY AND LEGALLY DISPOSED OF.
10. WV CITY WATER CONSTRUCTION PERMIT REQUIRED, TO BE OBTAINED BY CONTRACTOR.

PROPOSED NEW STREET CONSTRUCTION BY SEPARATE CONTRACTOR IT IS THE OWNER'S INTENT THAT THIS WORK SHALL BE COMPLETED AT THE SAME TIME AS THIS PROJECT COORDINATION WITH FUTURE PACKAGE REQUIRED

SHARED CONTRACTOR SCOPE W ICO CONTRACTOR, PARKING CONTRACTOR TO DOCUMENT ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION

3 PROJECT LIMIT EDGE DETAIL
1/4" = 1'-0"

2 TRANSFORMER ENCLOSURE
1/8" = 1'-0"

SITE PLAN LEGEND

- PROJECT LIMIT LINE
- PROPERTY LINE - PHASE 1
- PHASE 1 1 BY CITY CONTRACTOR TO COOPERATE W CITY DWGS. SCHEDULE
- CONSTRUCTION STAGING & STORAGE AREA, COORDINATE WITH CITY.

1 CONTEXT REFERENCE PLAN
1" = 30'-0"

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

PROJECT SITE PLAN AND LIMITS

Date OCTOBER 30 2017

A001

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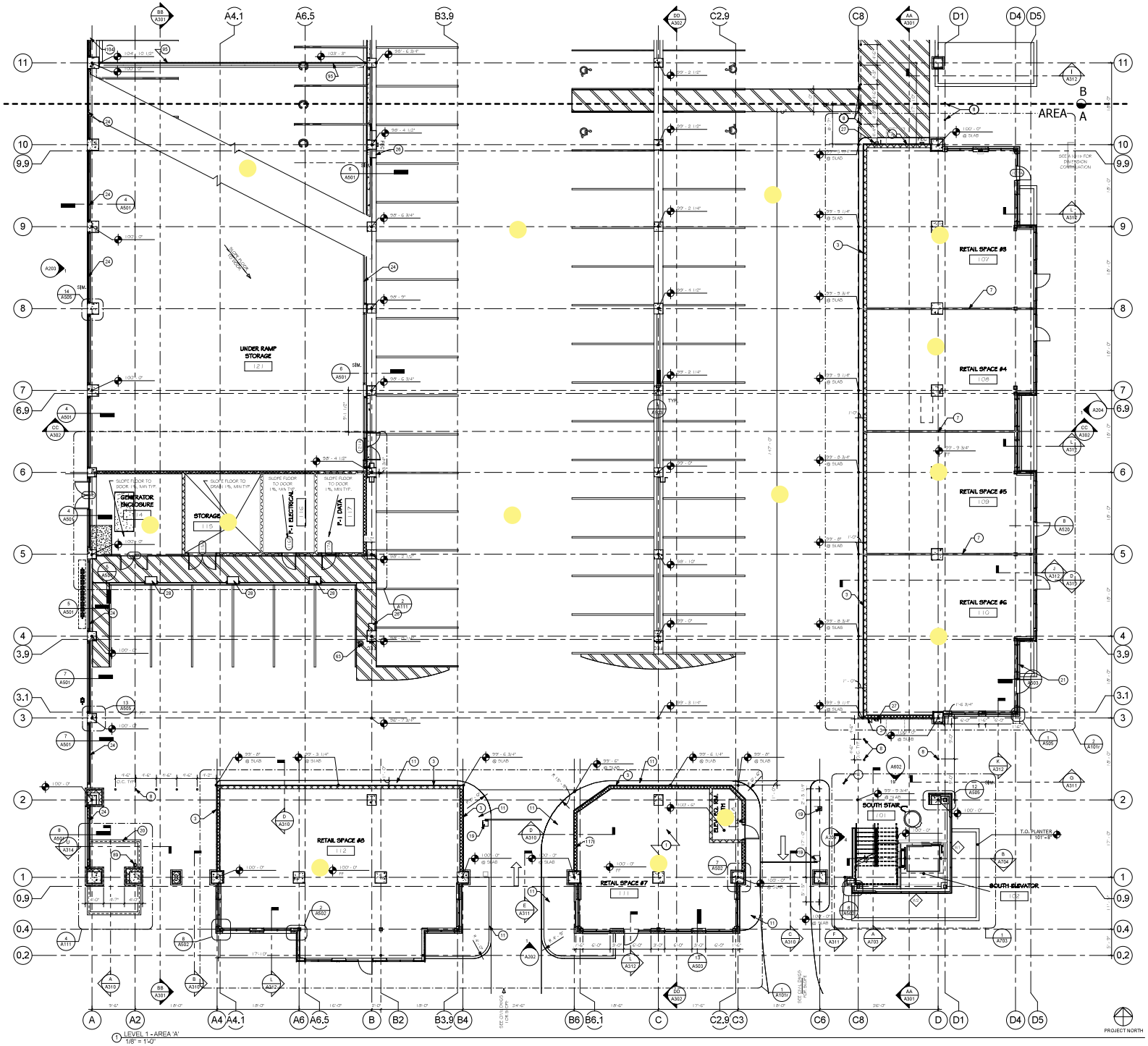


1 LEVEL 1 - AREA 'A'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.72
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P-1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE AG SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F-2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GYPCRAM + 4" STRUCTURAL SLAB)

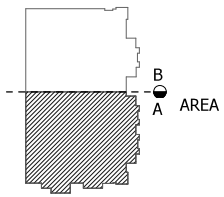
KEYNOTE LEGEND

#	NOTE
	RETAIL SPACES TO HAVE 4" DRAINAGE FILL, PREP TO RECEIVE FUTURE 4" CONCRETE SLAB ON GRADE
3	2" EIFS PROVIDE VERTICAL CONTROL JOINTS AT 18'-0" CTR'S LOCATED AT ALL GRIDS
7	FUTURE TENANT DIVISION WALL (NOT IN CONTRACT)
8	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA9A01 - FOR SLAB ON GRADE & STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
11	CONCRETE CURB, 6" ABOVE SLAB WALL
19	FUTURE PARKING CONTROL EQUIPMENT - COORDINATE WITH ELECTRICAL FOR CONDUIT IN THIS LOCATION
D2	CONCRETE PLANTER, SEE LANDSCAPE DETAIL LA.L501
E1	RAISED CONCRETE CURB (TYP) W/ PLANTER TOP
E4	DECORATIVE TRUSS SYSTEM, SEE DETAIL 6/A9A01 AND 4/A9A01
G5	PIPE GUARD, SEE DETAIL 1/LA.501
G7	EMERGENCY PHONE
G8	PEDESTAL MOUNTED ELECTRIC VEHICLE CHARGING STATION
K3	FLOOR DRAIN SEE PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
P2	PIPING PIPE, SEE FIRE SAFETY DRAWINGS. CONTRACTOR TO COORDINATE ALL DECK AND BEAM PENETRATIONS WITH STRUCTURAL
R5	CP TRAFFIC RATED SEALANT JOINT WITH BACKER ROD @ TRANSITION FROM C.I.P. SLAB TO P.T. SLAB COORDINATE WITH STRUCTURAL D1 (9/S202)
T.O.1	CAST IN PLACE CONCRETE SITE WALL
T.P.	

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE. SEE SPECS FOR PREPARATION AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL, NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

eda

#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 01 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

A101a

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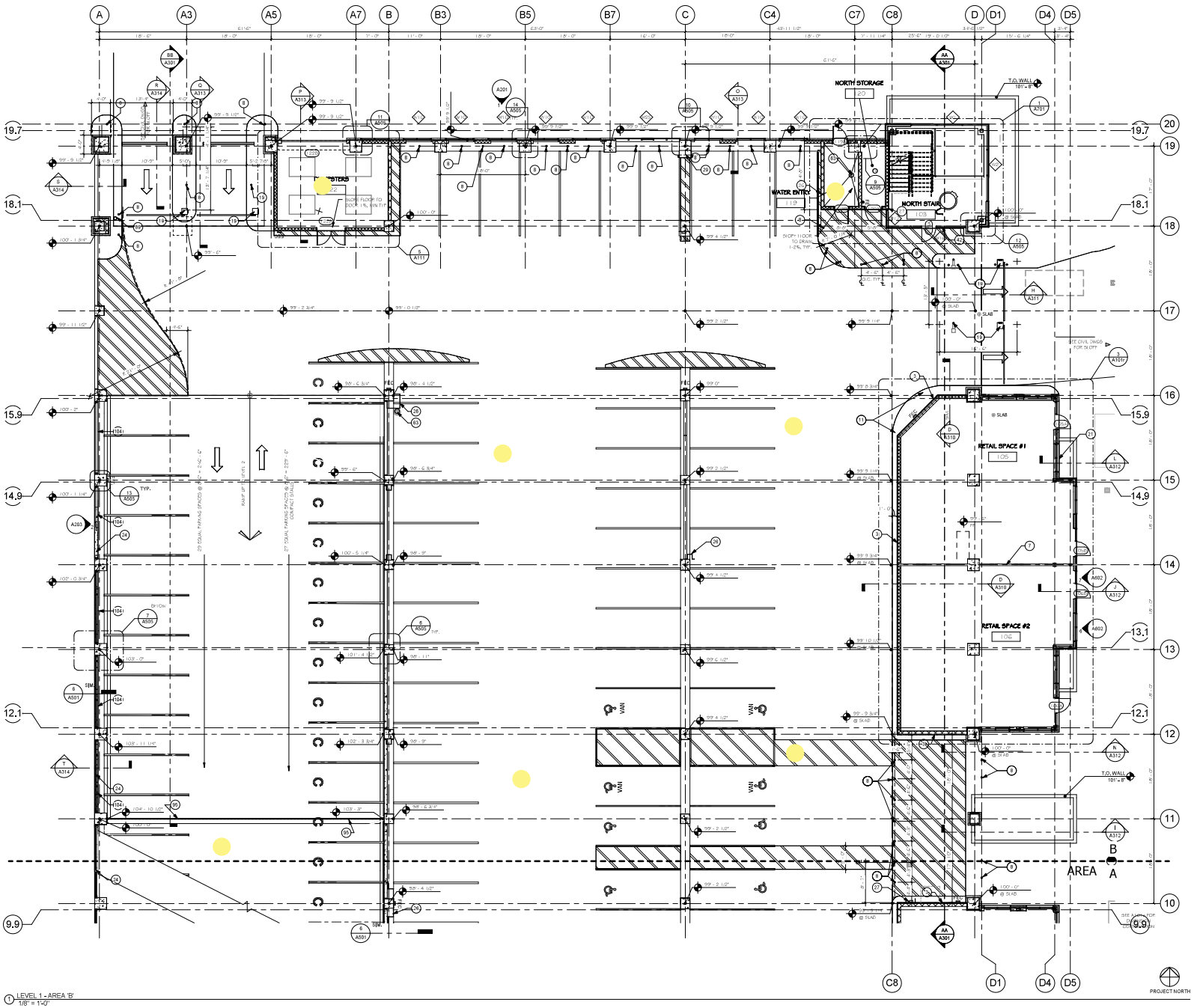


1 LEVEL 1 - AREA 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION FOUNATION FLR'V. 1'00'-0" = 4257.7'0
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE "1" GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL PIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES SEE A6 SHEETS FOR DETAILS OF COLORS, JOB LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F.F. SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL FT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

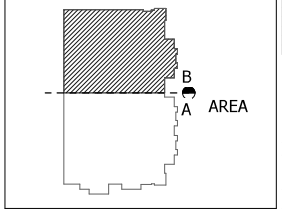
KEYNOTE LEGEND

#	NOTE
5	EFIFS PROVIDE VERTICAL CONTROL JOINTS AT 1'8'-0" CTRS LOCATED AT ALL GRIDS
7	FUTURE TENANT DIVISION WALL (NOT IN CONTRACT)
9	BOLLARD, PAINT FINISH: BOLLARD INCLUDING BASE: PLATE 3FH (FT-AN) (GASO). FOR SLAB ON GRADE & STRUCTURAL FOR HEIDO REQUIREMENTS IN POST TENSIONED SLABS
11	CONCRETE CURB, 6" ABOVE SLAB MIN.
19	FUTURE PARKING CONTROL EQUIPMENT. COORDINATE WITH ELECTRICAL FOR CONDUIT IN THIS LOCATION
21	FADED CONCRETE CURB LEVEL W/ PLANTER TOP
24	DECORATIVE FENCE SYSTEM. SEE DETAIL (2/A501) AND 4/A501
26	FIRE GUARD. SEE DETAIL 1 (1)/A-501.
27	EMERGENCY PHONE
29	WALL MOUNTED ELECTRIC VEHICLE CHARGING STATION
32	CURTAIN WALL SYSTEM. SEE WINDOW TYPES
43	FLOOR DRAIN SEE PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS (1/1) SHEET FOR SLOPING REQUIREMENTS
89	STAND PIPE. SEE FIRE SAFETY DRAWINGS. CONTRACTOR TO COORDINATE ALL DECK AND BEAM PENETRATIONS WITH STRUCTURAL
95	2" TRAFFIC RATED SEALANT JOINT WITH BACKER ROD @ TRANSITION FROM C.I.P. SLAB TO P.T. SLAB COORDINATE WITH STRUCTURAL (D/L/H 5/C2)
104	CAST IN PLACE CONCRETE SITE WALL

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE. SURFACE SPE SPECS FOR PREPARATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-2411-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

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PROJECT ARCHITECT GB
PROJECT MANAGER JP
ARCHITECT PROJECT # 213069-1
OWNER PROJECT # --

Description	Date

LEVEL 01 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A101b

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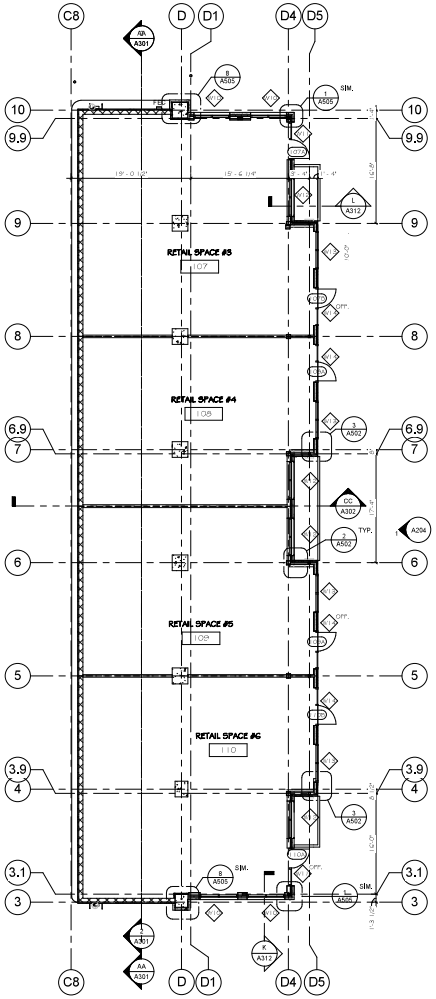
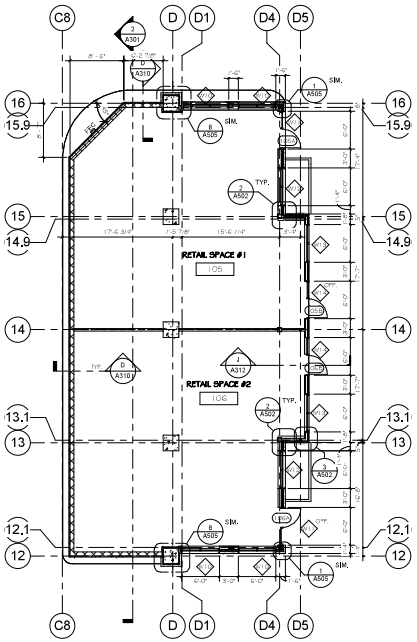
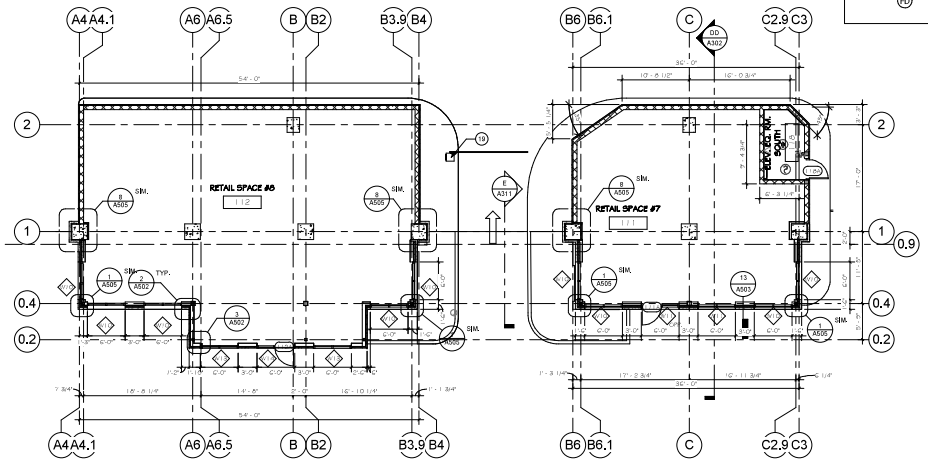


2 ENLARGED RETAIL PLAN
1/8" = 1'-0"



3 ENLARGED RETAIL PLAN
1/8" = 1'-0"



1 ENLARGED RETAIL PLAN
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 1.00'=4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AS SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-1". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SFT AS SHEETS FOR DETAILS OF COLORS, DIM. LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. P-T SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

KEYNOTE LEGEND	
#	NOTE
19	FUTURE PARKING CONTROL EQUIPMENT. COORDINATE WITH ELECTRICAL FOR CONDUIT IN THIS LOCATION.

FLOOR PLAN LEGEND

	NEW WALLS. SEE WALL TYPES.
FEC	SURFACE MOUNTED FIRE EXTINGUISHER CABINET
	TYPICAL DIAGONAL STRIPING SEE AS SHEETS.
	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND TWO APPLICATION
	RETAIL PERIMETER BELOW
C	DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
FD	FLOOR DRAIN

STATE OF UTAH
THOMAS S. BRENNAN
97-241-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

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F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

	Description	Date

LEVEL 01 FLOOR PLAN - RETAIL

Date OCTOBER 30 2017

A101r

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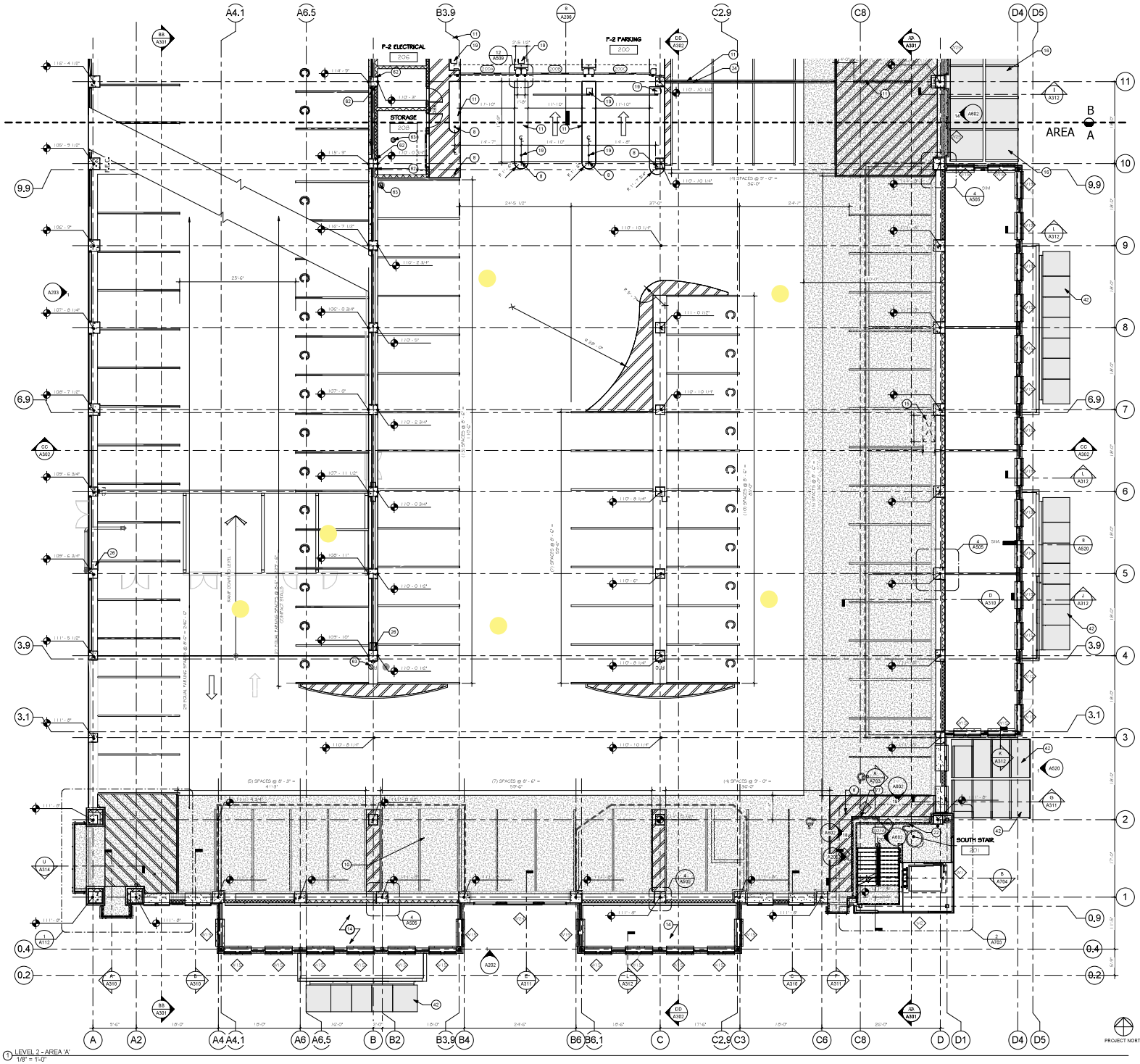

1 LEVEL 2 - AREA 'A'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.77'
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE F1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
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8. F-2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

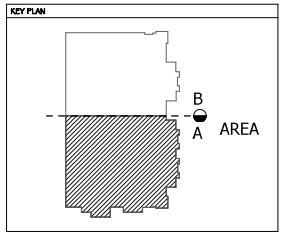
KEYNOTE LEGEND

#	NOTE
8	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA501 FOR SLAB ON GRADE & STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
10	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
11	CONCRETE CURB, 6" ABOVE SLAB MIN.
14	RETAIL BELOW
15	FUTURE BLOCKOUT GREASE EXHAUST. REFERENCE STRUCTURAL (6) #4 WITH CONCRETE TO MATCH SLAB DESIGN
16	OVERHEAD GLASS CANOPY AND STRUCTURAL SUPPORT. SEE SHEET A111
19	FUTURE PARKING CONTROL EQUIPMENT. COORDINATE WITH ELECTRICAL FOR CONDUIT IN THIS LOCATION
D2	SLAB EDGE
E4	DECORATIVE FINISH SYSTEM. SEE DETAIL 6/A5401 AND 4/A5401
G5	PIPE GUARD. SEE DETAIL 1/DA501
K5	CURTAIN WALL SYSTEM. SEE WINDOW TYPES
K2	5" GAP BETWEEN WALL AND CONC COLUMN CAULK COLUMN BOTH SIDES FULL LENGTH TO STRUCTURE ABOVE
K3	FLOOR DRAIN SEE PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
P7	SCHEDULED GLAZING

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

#9 EXCHANGE PLACE
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O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 02 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

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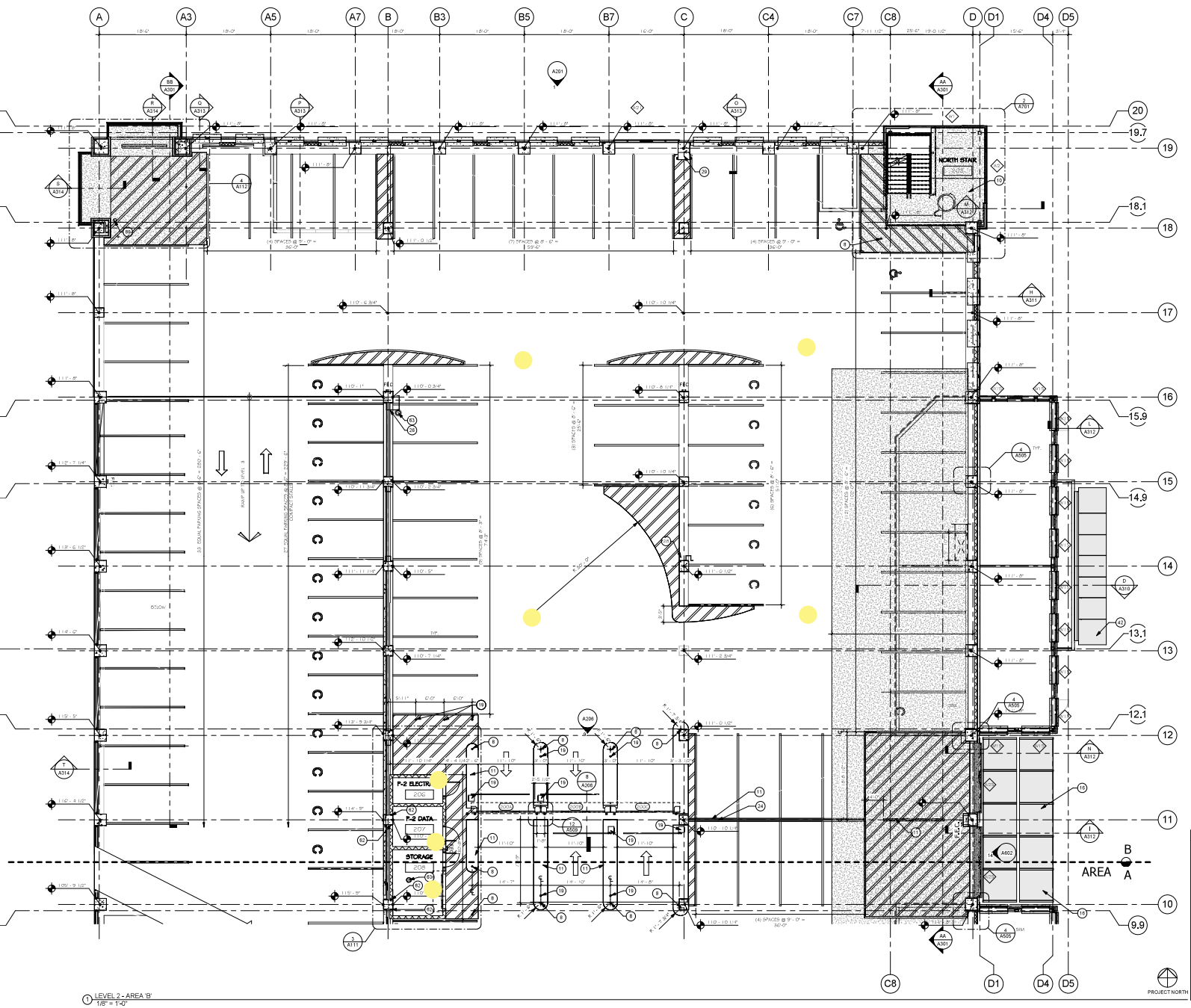

1 LEVEL 2 - AREA 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P-1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
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6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLAN IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES SEE AG SHEETS FOR DETAILS OF COLORS, DRIVE LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F-2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" SITCRAM + 4" STRUCTURAL SLAB)

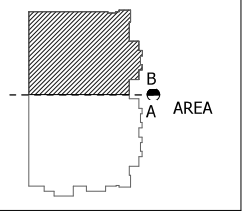
KEYNOTE LEGEND

#	NOTE
8	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA501 FOR SLAB ON GRADE + STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
10	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
11	CONCRETE CURB, 12" ABOVE SLAB MIN.
12	OVERHEAD GLASS CANOPY AND STRUCTURAL SUPPORT, SEE SHEET A111
19	FUTURE PARKING CONTROL EQUIPMENT, COORDINATE WITH ELECTRICAL FOR CONDUIT IN THIS LOCATION
24	DECORATIVE FENCE SYSTEM, SEE DETAIL 6/A501 AND 4/A501
26	PIPE GUARD, SEE DETAIL 11/A501
29	WALL MOUNTED ELECTRIC VEHICLE CHARGING STATION
42	CURTAIN WALL SYSTEM, SEE WINDOW TYPES
62	3" GAP BETWEEN WALL AND CONC COLUMN CAULK COLUMN BOTH SIDES FULL LENGTH TO STRUCTURE ABOVE
63	FLOOR DRAIN SEE PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
69	STAND PIPE, SEE FIRE SAFETY DRAWINGS, CONTRACTOR TO COORDINATE ALL DECK AND BEAM PENETRATIONS WITH STRUCTURAL

FLOOR PLAN LEGEND

- NEW WALLS, SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



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O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 02 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A102b

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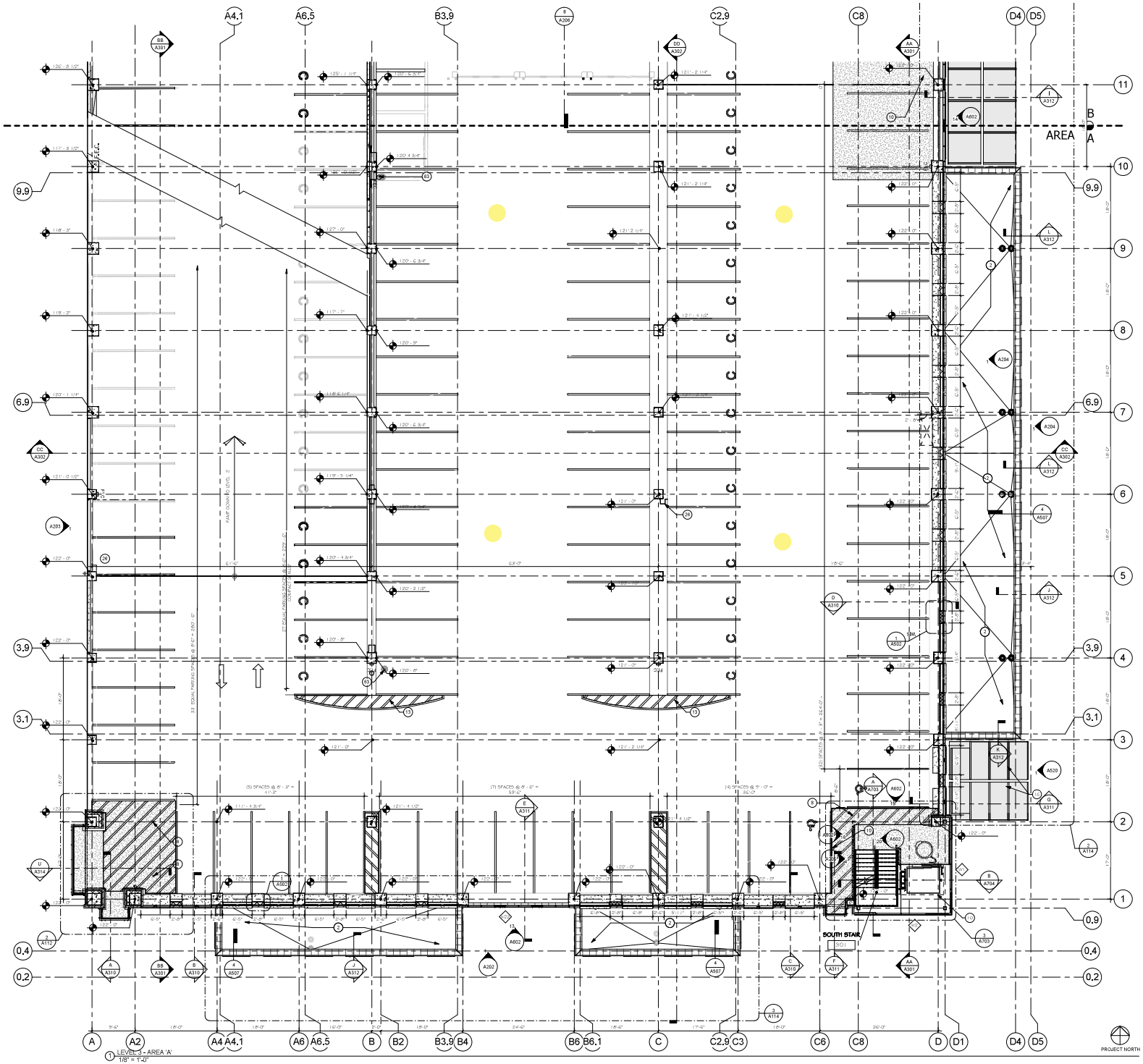


FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 1000'-0" = 4257.70'
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE F1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES SEE AG SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F-2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

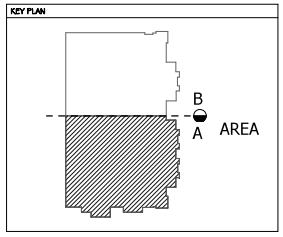
KEYNOTE LEGEND

#	NOTE
9	ROOF BELOW. SEE ROOF PLANS ON SHEET A107
9	ISOLATED, PAINT ENTIRE ISOLATED INCLUDING EMBED PLATE (SEE DETAIL 1/0A5501 FOR SLAB ON GRADE & STRUCTURAL FOR IMBED REQUIREMENTS IN POST TENSIONED SLABS)
10	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PREPARATION AND FINAL APPLICATION
13	TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
26	PIPE GUARD. SEE DETAIL 1/0A5501
63	FLOOR DRAIN SEE PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PREPARATION AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
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eda

#9 EXCHANGE PLACE
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PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 03 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

A103a

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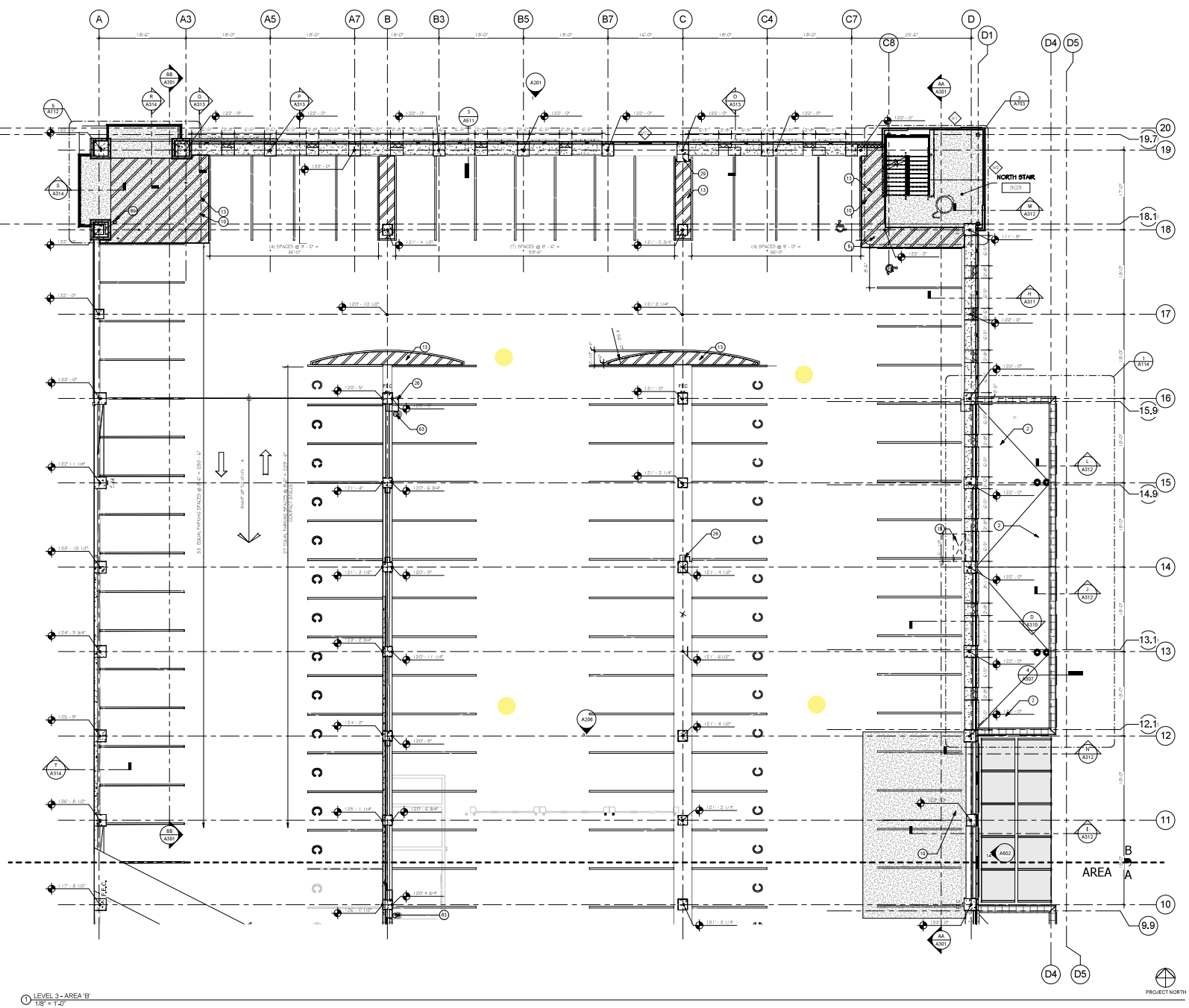


1 LEVEL 3 - AREA 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.70'
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE FIRST GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES SEE AG SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F.F. SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" SCORDAM + 4" STRUCTURAL SLAB)

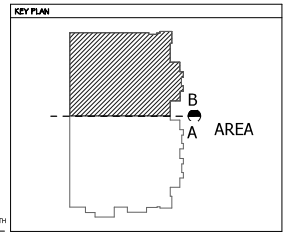
KEYNOTE LEGEND

#	NOTE
5	ROOF BELOW. SEE ROOF PLANS ON SHEET A107
9	ISOLATED, PAINT ENTIRE ISOLATED INCLUDING BASE PLATE SEE DETAIL 1/0A501 FOR SLAB ON GRADE & STRUCTURAL FOR IMBED REQUIREMENTS IN POST TENSIONED SLABS
10	TRAFFIC COATING APPLIED TO CONCRETE. BUILD AS SHP SPECS I OR PRETREATING AND FINAL APPLICATION
13	TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
15	FUTURE BI-DIRECTOUT GREASE EXHAUST. REFERENCE STRUCTURAL DET. #1 WITH CONCRETE TO MATCH SLAB DESIGN
E6	PPT GUARD. SPT DETAIL 11/A501
E9	WALL MOUNTED ELECTRIC VEHICLE CHARGING STATION
C3	FLOOR DRAIN EMT PLUMBING DRAINAGE. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
S9	STAND PIPE. SPT FIRE SAFETY DRAWINGS. CONTRACTOR TO COORDINATE ALL DECK AND DRAIN PENETRATIONS WITH STRUCTURAL

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SHP SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SHP SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-2411-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
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F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 03 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A103b

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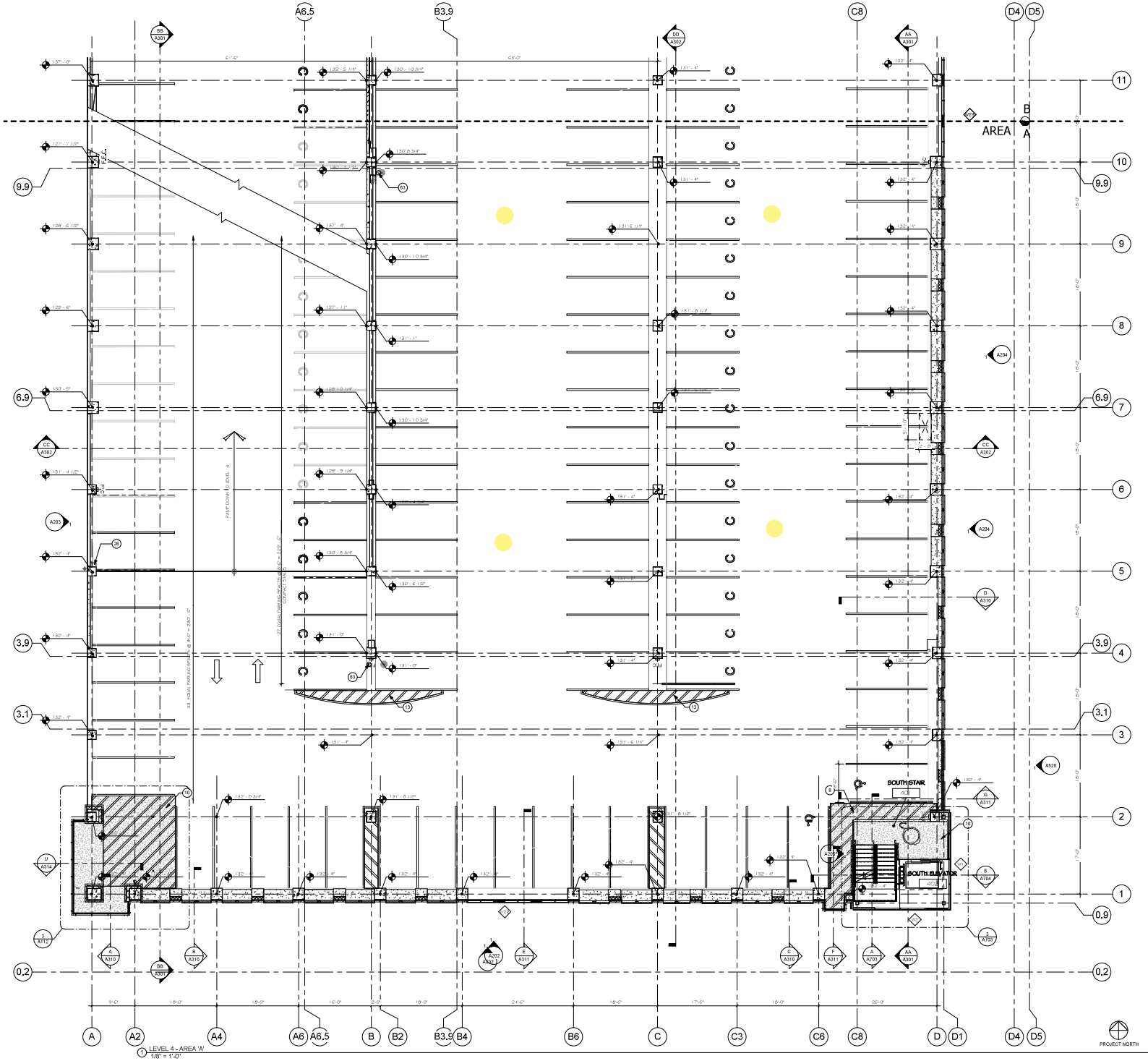


1 LEVEL 4 - AREA 'A'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE A6 SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. P-7 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GYPCRETE + 4" STRUCTURAL SLAB)

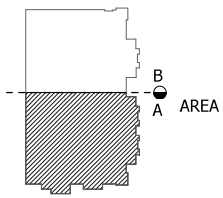
KEYNOTE LEGEND

#	NOTE
8	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA5.01 FOR SLAB ON GRADE + STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
10	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
13	TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
26	PIPE GUARD. SEE DETAIL 1/DA5.01
63	FLOOR DRAIN SET PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS

FLOOR PLAN LEGEND

	NEW WALLS. SEE WALL TYPES.
FEC	SURFACE MOUNTED FIRE EXTINGUISHER CABINET
	TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
	RETAIL PERIMETER BELOW
C	DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
FD	FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

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eda

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F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 04 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

A104a

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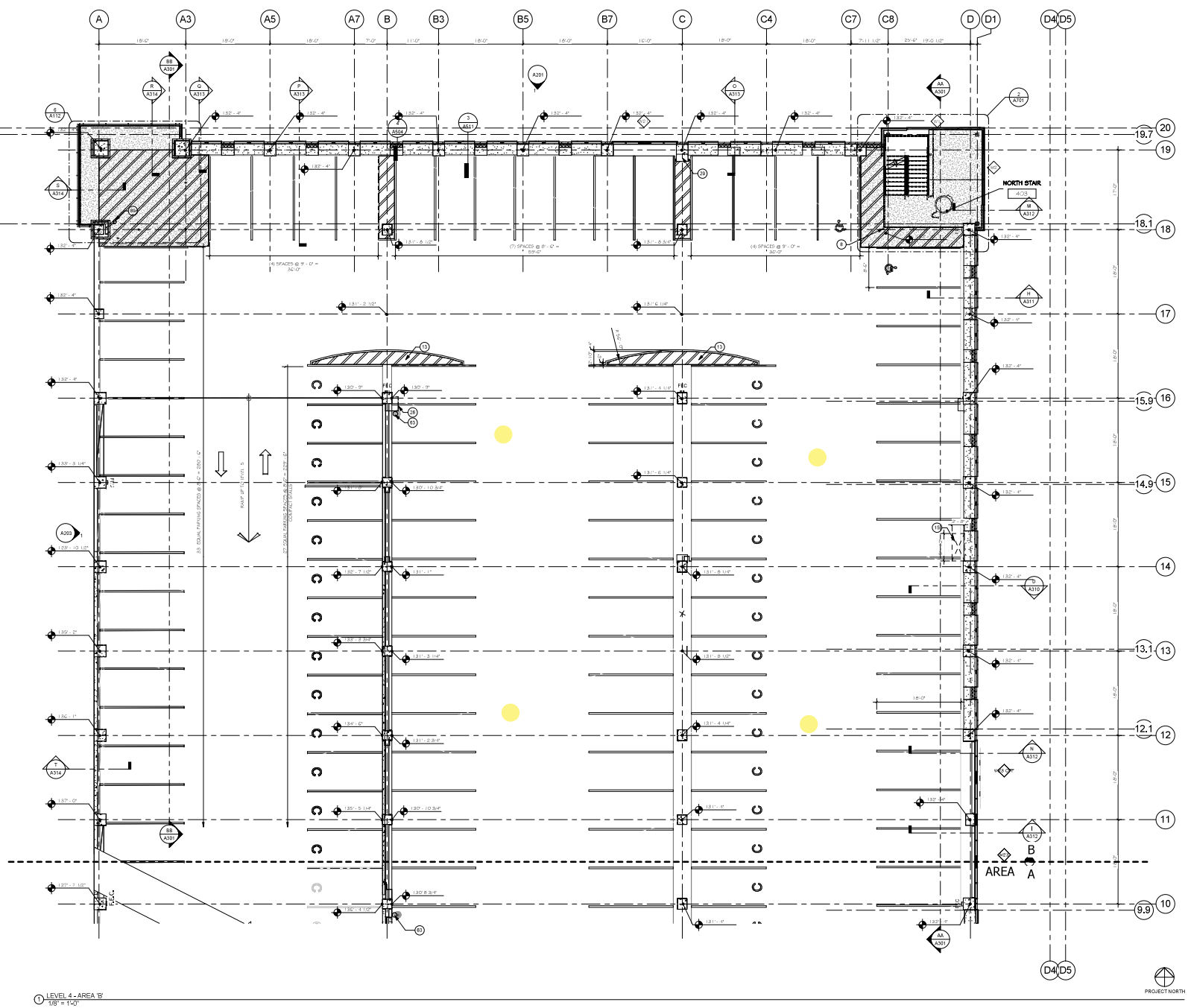


1 LEVEL 4 - AREA 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.70'
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE F.1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE A6 SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F.2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

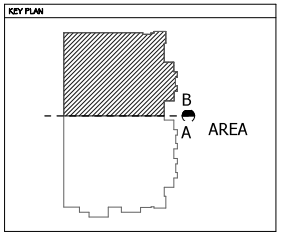
KEYNOTE LEGEND

#	NOTE
8	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA501 FOR SLAB ON GRADE + STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
13	TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
15	FUTURE BLOCKOUT GARAGE PARAPET, REINFORCED STRUCTURAL, FILL IN WITH CONCRETE TO MATCH SLAB DESIGN
52	PIPE GUARD, SEE DETAIL 1/DA501
59	WALL MOUNTED ELECTRIC VEHICLE CHARGING STATION
63	FLOOR DRAIN SEE PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
80	STAND PIPE, SEE FIRE SAFETY DRAWINGS, CONTRACTOR TO COORDINATE ALL DECK AND BEAM PENETRATIONS WITH STRUCTURAL

FLOOR PLAN LEGEND

- NEW WALLS, SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PREPARATION AND FINAL APPLICATION
- METAL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL, NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-2411-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
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#9 EXCHANGE PLACE
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PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 04 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A104b

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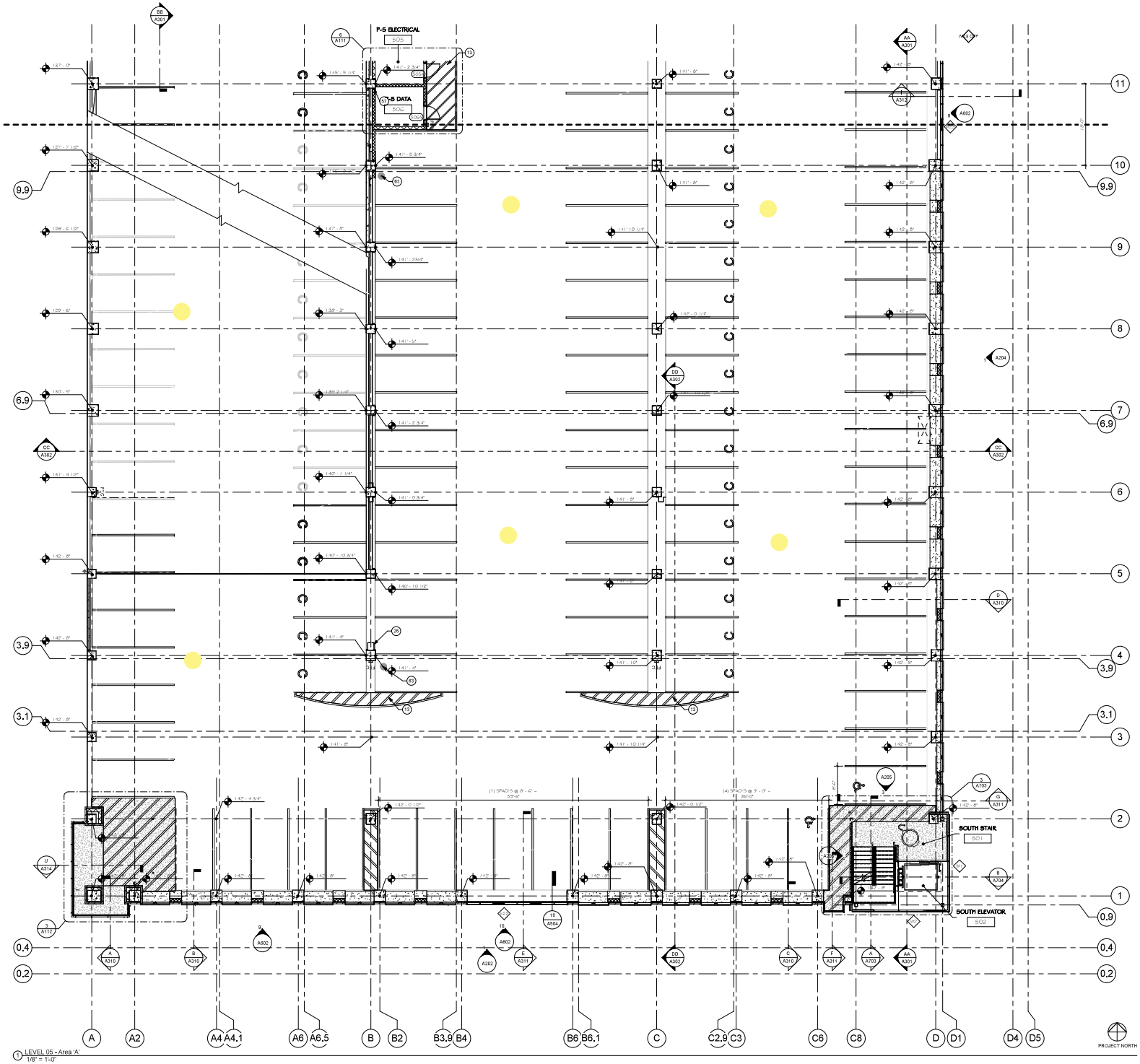


1 LEVEL 05 - Area 'A'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 1 00'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE AG SHEETS FOR DETAILS OF COLORS, DOL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. P-7 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

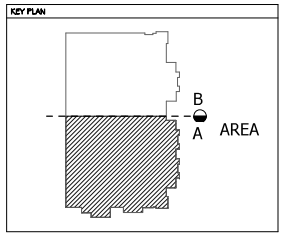
KEYNOTE LEGEND

#	NOTE
L3	TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
G2	PIPE GUARD. SEE DETAIL 1 UA-501.
S1	CALCIUM SILICATE MASONRY UNIT
E3	FLOOR DRAIN SFF PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SFF SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS

FLOOR PLAN LEGEND

- NEW WALLS. SFF WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SFF SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

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PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 05 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

A105a

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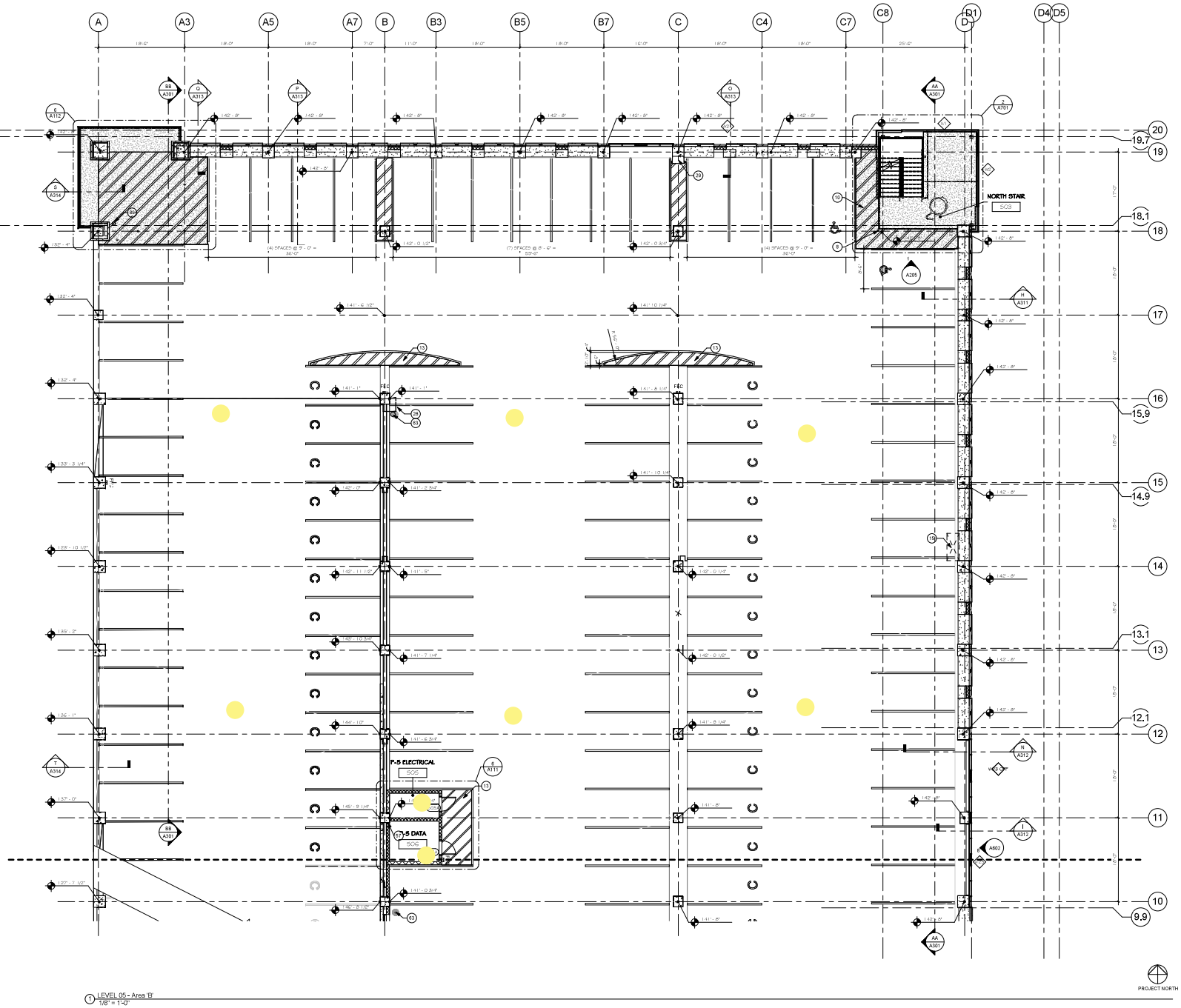


1 LEVEL 05 - Area 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATIONAL ELEV. 1.00'-0" = 4257.70'
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PERIMETER SHIFTS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE: BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE 3 MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES SEE A6 SHEETS FOR DETAILS OF COLORS, DIA. LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. P-7 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 3.5" HIGHER (1.5" EPOXY ONLY + 4" STRUCTURAL SLAB)

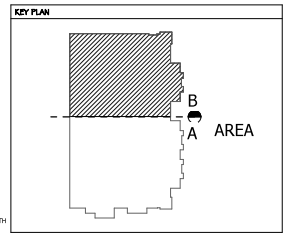
KEYNOTE LEGEND

#	NOTE
B	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA501 FOR SLAB ON GRADE + STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
T0	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
T3	TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
T5	FUTURE BLOCKOUT GRADE EXPANSION. REFERENCE STRUCTURAL. FILL IN WITH CONCRETE TO MATCH SLAB DESIGN
G2	PIPE GUARD. SEE DETAIL 1/DA501
E9	WALL MOUNTED ELECTRIC VEHICLE CHARGING STATION
B7	CALCIUM SILICATE MASONRY UNIT
D1	FLOOR DRAIN SEE PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
S9	STAND PIPE. SEE FIRE SAFETY DRAWINGS. CONTRACTOR TO COORDINATE ALL DECK AND DRAIN PENETRATIONS WITH STRUCTURAL

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND -SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-2411-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 -- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 05 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A105b

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1 LEVEL 06 - Area 'A'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 1001'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE: BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK, TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES.
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE AG SHEETS FOR DETAILS OF COLORS, SEE LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. P-2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL FT OR OF STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

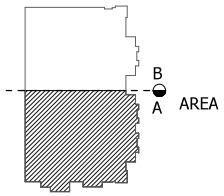
KEYNOTE LEGEND

#	NOTE
13	TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
35	PIPE GUARD. SEE DETAIL 1 / UA-501.
63	FLOOR DRAIN SEE PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS

FLOOR PLAN LEGEND

	NEW WALLS. SEE WALL TYPES.
FEC	SURFACE MOUNTED FIRE EXTINGUISHER CABINET
	TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
	RETAIL PERIMETER BELOW
C	DENOTES COMPACT CAR PARKING STALL NO STRIPING ON GROUND - SEE SIGNAGE PACKAGE FOR SIGNAGE
FD	FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
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PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 06 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

A106a

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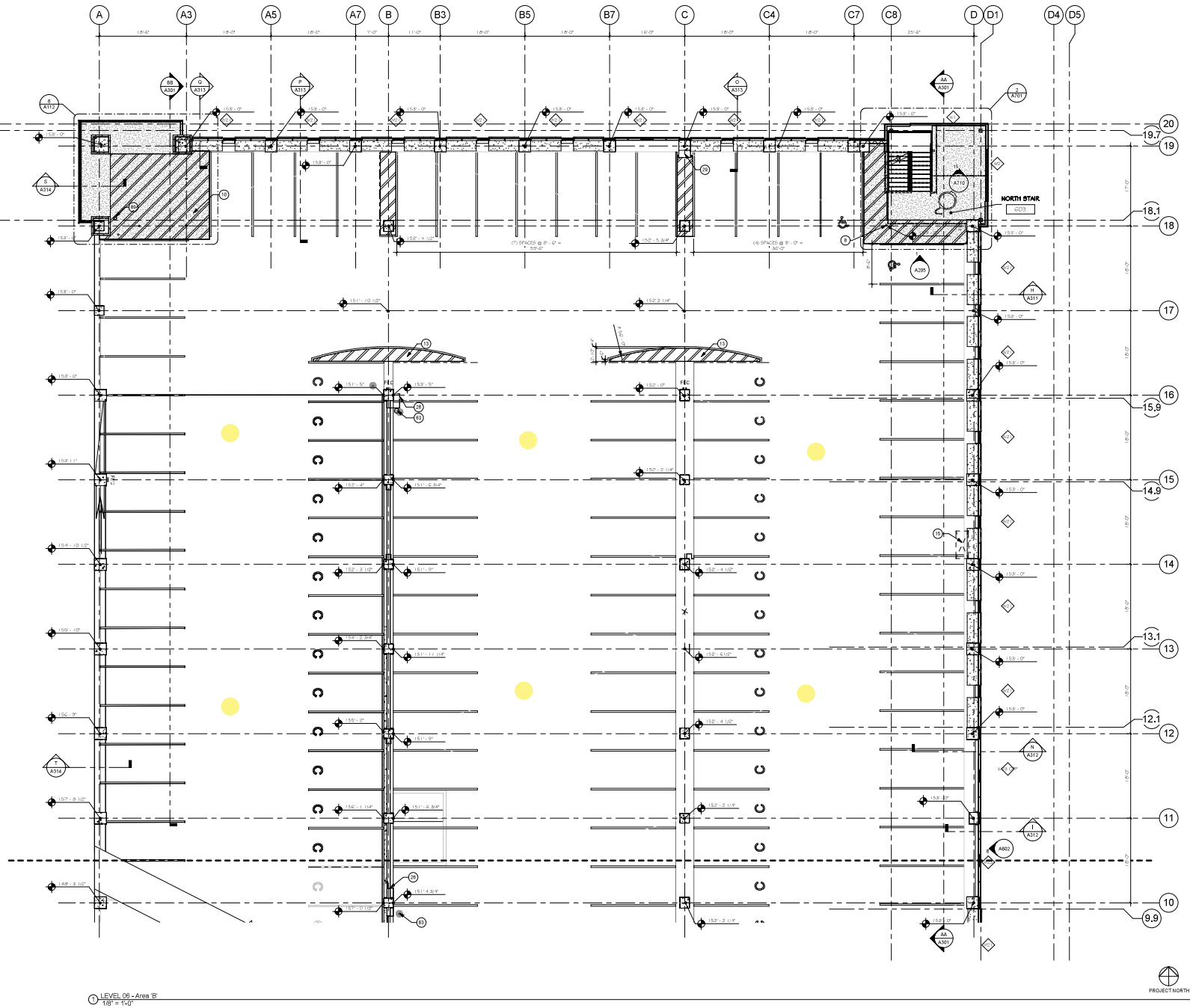


1 LEVEL 06 - Area 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: F.F.V. - 100'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AG SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE F1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK, TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES.
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE AG SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F1 IS AS FLUMTOND RH FINISH TOP OF STRUCTURAL FT OR OF STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

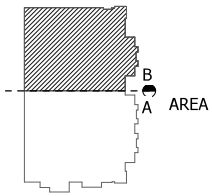
KEYNOTE LEGEND

#	NOTE
8	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA501 FOR SLAB ON GRADE + STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
10	TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
13	TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
15	FUTURE BLOCKOUT GRADE EXPANSION. REFERENCE STRUCTURAL. FILL IN WITH CONCRETE TO MATCH SLAB DESIGN
26	PIPE GUARD. SEE DETAIL 1/DA501
29	WALL MOUNTED ELECTRIC VEHICLE CHARGING STATION
63	FLOOR DRAIN SEE PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS.
80	STAND PIPE. SEE FIRE SAFETY DRAWINGS. CONTRACTOR TO COORDINATE ALL DECK AND BEAM PENETRATIONS WITH STRUCTURAL.

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AG SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 -- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

#9 EXCHANGE PLACE
SUITE 1100
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UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 06 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A106b

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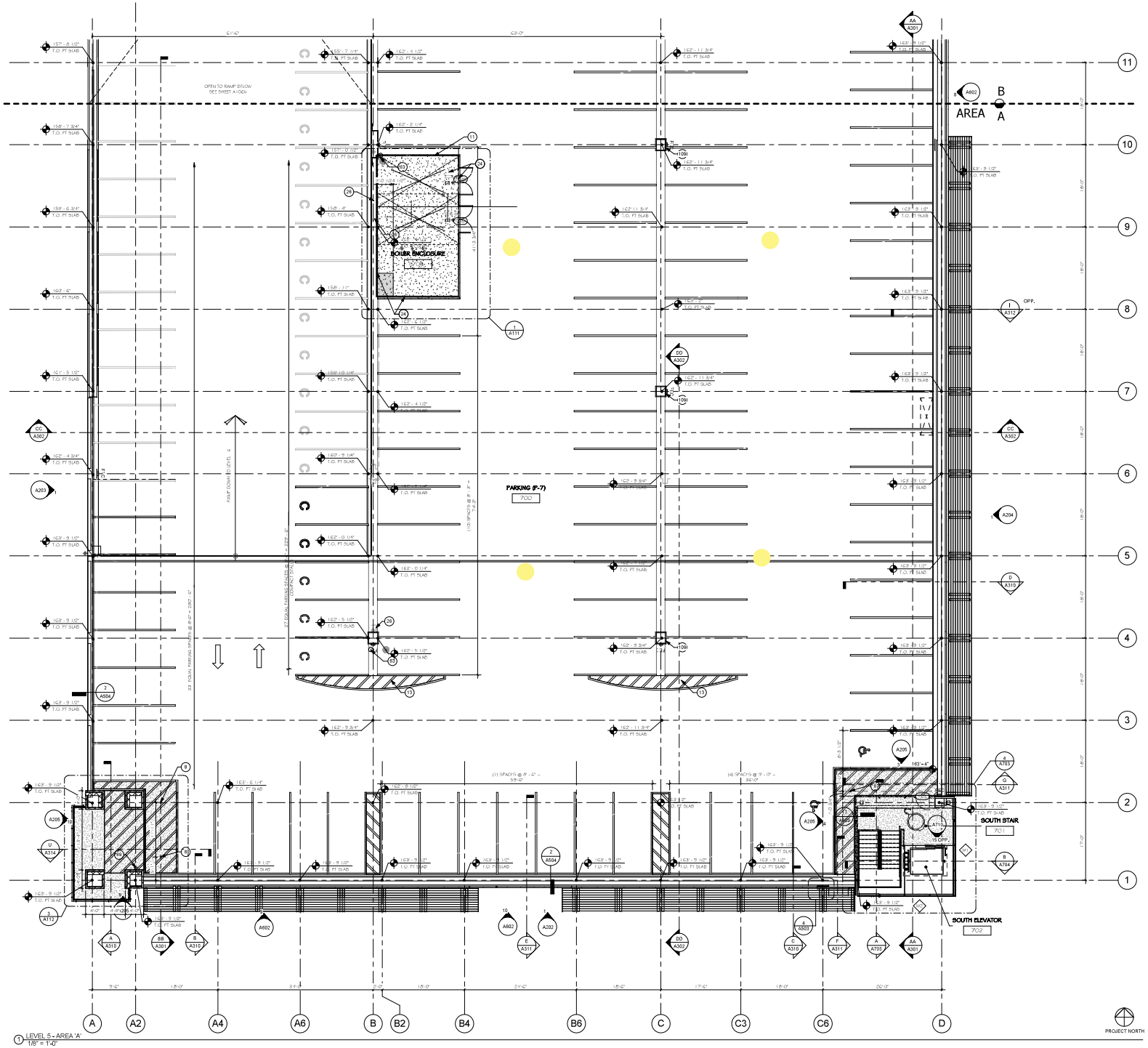

1 LEVEL 5 - AREA 'A'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 1000'-0" = 4257.70'
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE F-1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
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6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE A6 SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F-7 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GYPCRETE + 4" STRUCTURAL SLAB)

KEYNOTE LEGEND

#	NOTE
B	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/A9A501 FOR SLAB ON GRADE & STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
C1	CONCRETE CURB, 6" ABOVE SLAB MIN.
D	TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
E1	DECORATIVE FENCE SYSTEM, SEE DETAIL 6/A9A501 AND 14/A9A501
G	PIPE GUARD, SEE DETAIL 11/A9A501
F1	FLOOR DRAIN SEE PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
FP	STAND PIPE, SEE FIRE SAFETY DRAWINGS, CONTRACTOR TO COORDINATE ALL DECK AND BEAM PENETRATIONS WITH STRUCTURAL
109	FINISH SPACING/MISTABLE WALL TIE PER CALCULATIONS CALCULATE MASONRY UNIT REQUIREMENTS

FLOOR PLAN LEGEND

NEW WALLS, SEE WALL TYPES.

FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET

TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.

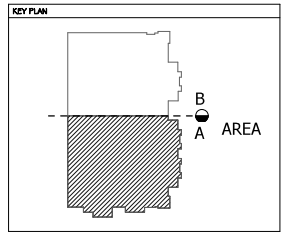
TRAFFIC COATING APPLIED TO CONCRETE SURFACE. SEE SPECS FOR PREPARATION AND FINAL APPLICATION

RETAIL PERIMETER BELOW

C — DENOTES COMPACT CAR PARKING STALL, NO STRIPING ON GROUND. SEE SIGNAGE PACKAGE FOR SIGNAGE

FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-241-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

eda

#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT GB
PROJECT MANAGER JP
ARCHITECT PROJECT # 213069-1
OWNER PROJECT # --

Description	Date

LEVEL 07 FLOOR PLAN - AREA 'A'

Date OCTOBER 30 2017

A107a

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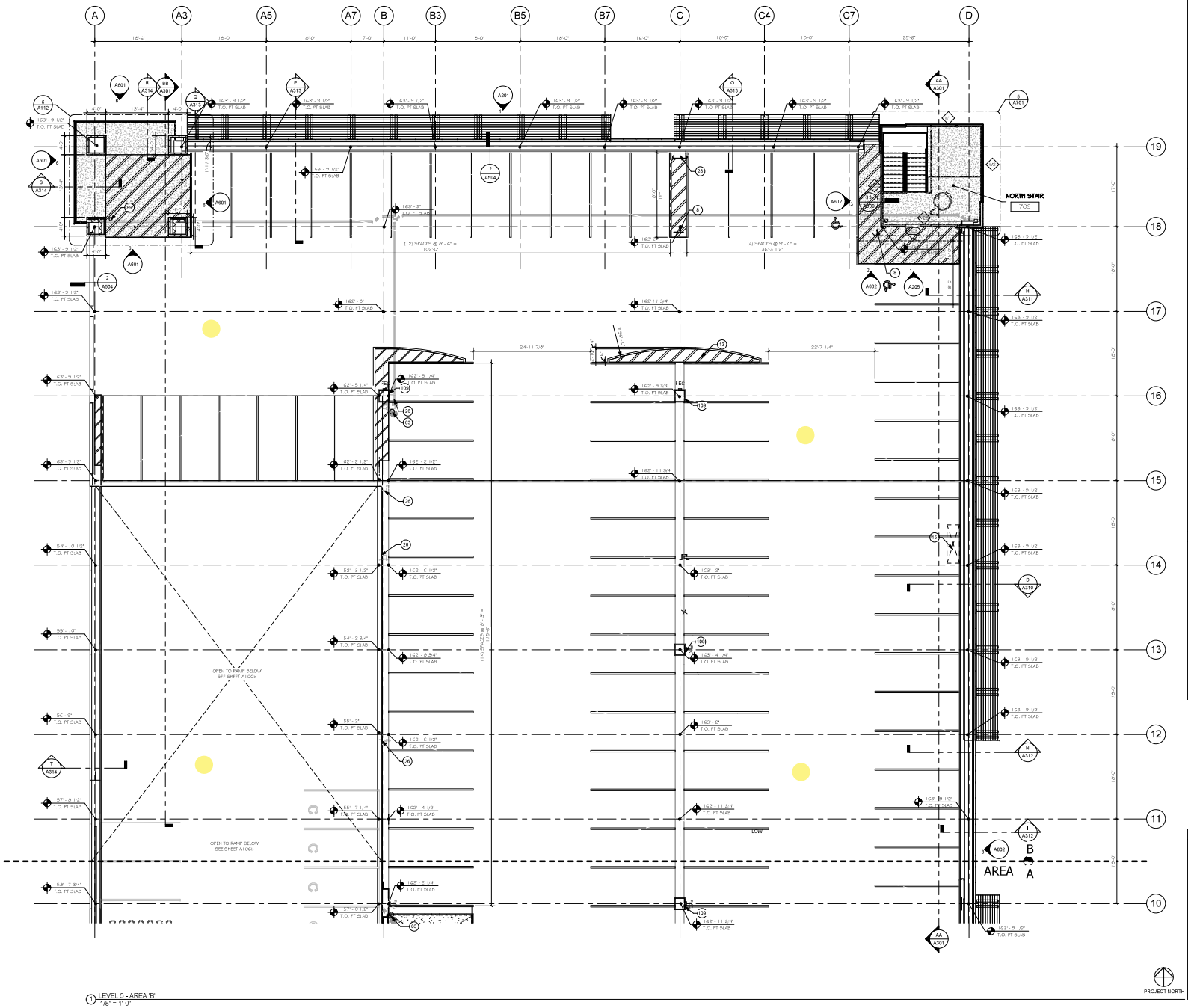

1 LEVEL 5 - AREA 'B'
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE A6 SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE F1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
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6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES SEE A6 SHEETS FOR DETAILS OF COLORS, DBL LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. F-2 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL PT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

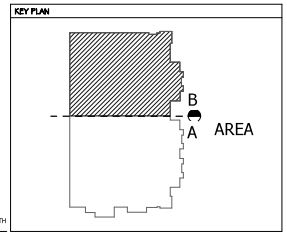
KEYNOTE LEGEND

#	NOTE
B	BOLLARD, PAINT ENTIRE BOLLARD INCLUDING BASE PLATE SEE DETAIL 1/DA501 FOR SLAB ON GRADE & STRUCTURAL FOR EMBED REQUIREMENTS IN POST TENSIONED SLABS
T.D	TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
T.D	FUTURE BLOCKOUT GARAGE PARAPET, REINFORCED STRUCTURAL, FILL IN WITH CONCRETE TO MATCH SLAB DESIGN
GC	PIPE GUARD, SEE DETAIL 1/DA501
EA	PEDESTAL MOUNTED ELECTRIC VEHICLE CHARGING STATION
ED	FLOOR DRAIN SEE PLUMBING DRAWINGS, SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS
SD	STAND PIPE, SEE FIRE SAFETY DRAWINGS, CONCEPTUAL TO COORDINATE ALL DECK AND DRAIN PENETRATIONS WITH STRUCTURAL
LDB	FINGER SPACE/ADJUSTABLE WALL TIE PER CALCIUM SILICATE MASONRY UNIT REQUIREMENTS

FLOOR PLAN LEGEND

- NEW WALLS, SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE A6 SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PREPARATION AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DENOTES COMPACT CAR PARKING STALL, NO STRIPING ON GROUND SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-2411-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

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#9 EXCHANGE PLACE
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PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

LEVEL 07 FLOOR PLAN - AREA 'B'

Date OCTOBER 30 2017

A107b

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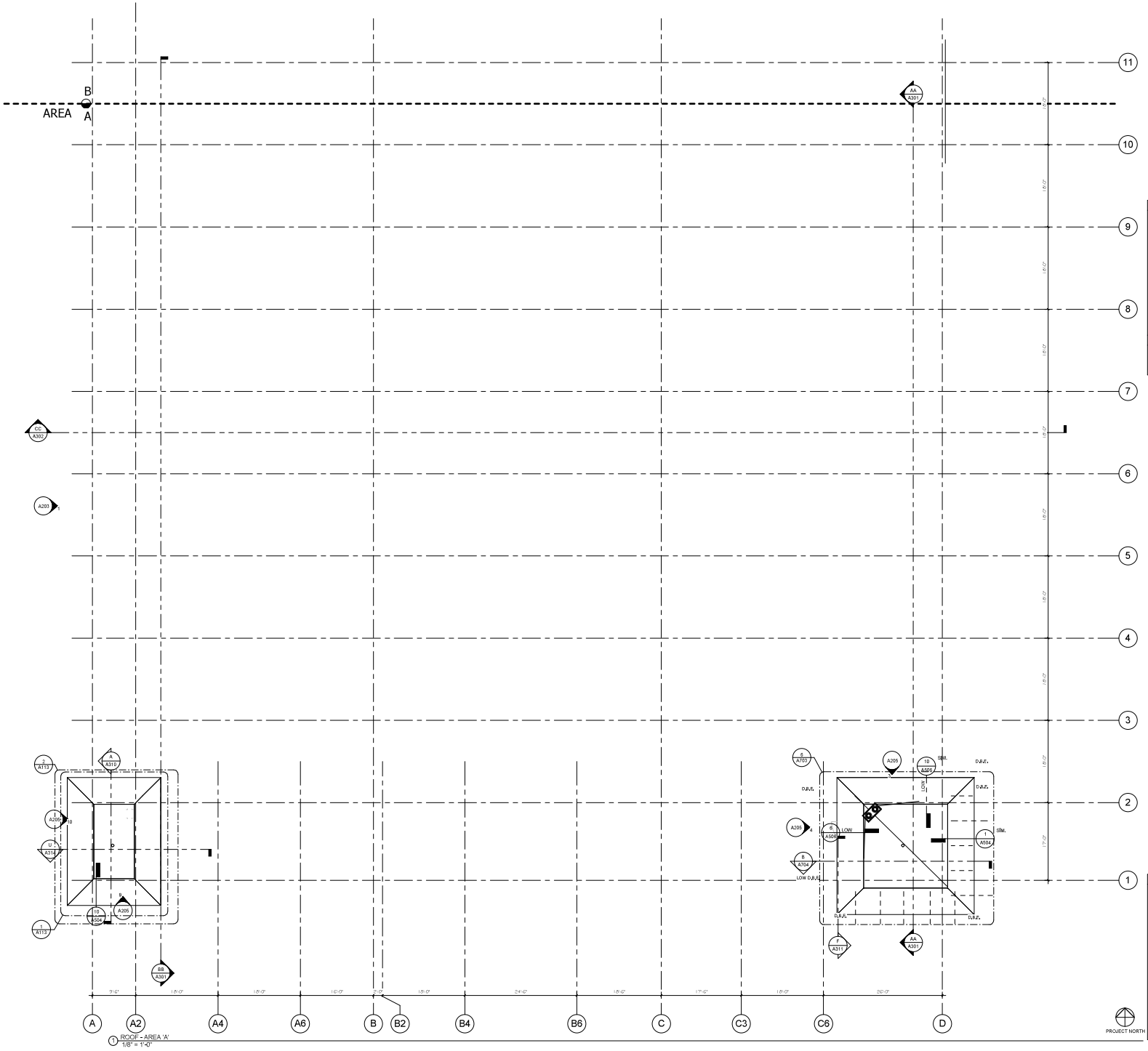


1 ROOF - AREA 'A'
1/8" = 1'-0"

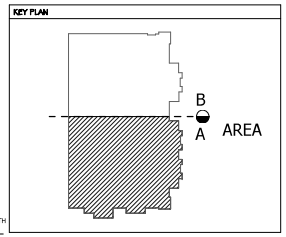
KEYNOTE LEGEND	
#	NOTE

ROOF PLAN GENERAL NOTES

ROOF PLAN LEGEND

SLOPE TO DRAIN — DIRECTION OF SLOPE

KEY PLAN



STATE OF UTAH
THOMAS S. BRENNAN
97-2414-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

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PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

	Description	Date

HIGH AND LOW ROOF PLANS - AREA 'A'

Date OCTOBER 30 2017

A110a

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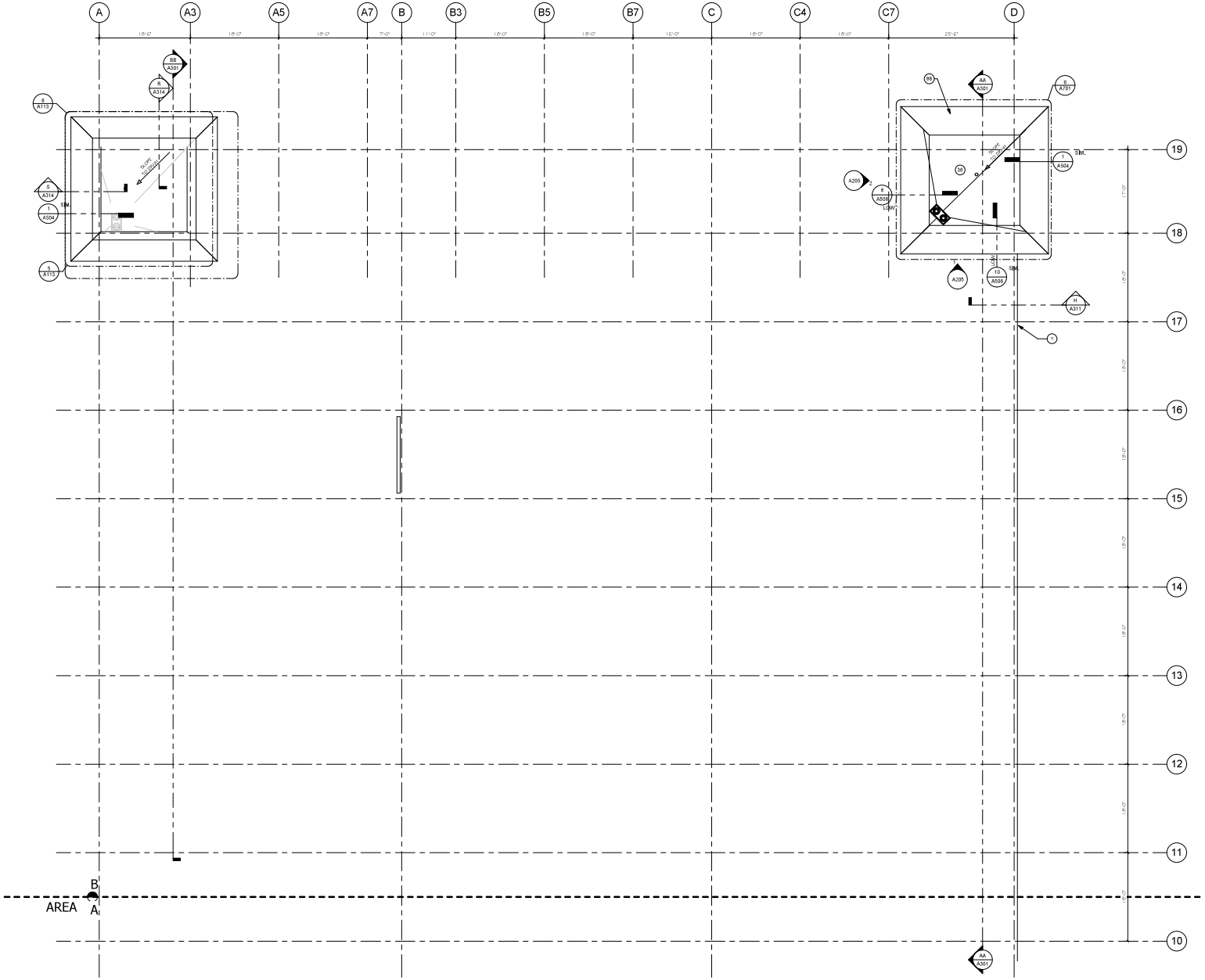


1 ROOF - AREA 'B'
1/8" = 1'-0"

PROJECT NORTH

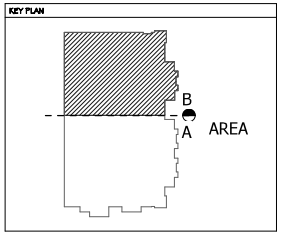
KEYNOTE LEGEND	
#	NOTE
BG	SINGLE PLY ROOF MEMBRANE
BB	PRE FINISHED CELLULAR DECK SOFFIT

ROOF PLAN GENERAL NOTES

ROOF PLAN LEGEND

SLOPE TO DRAIN — DIRECTION OF SLOPE

KEY PLAN



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PROJECT MANAGER	JP
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OWNER PROJECT #	--

	Description	Date

HIGH AND LOW ROOF PLANS - AREA 'B'

Date OCTOBER 30 2017

A110b

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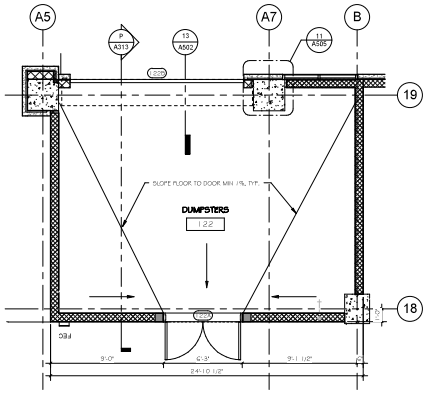
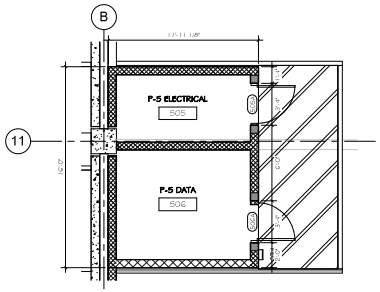
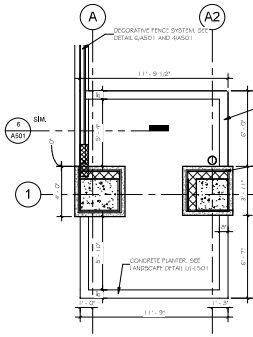


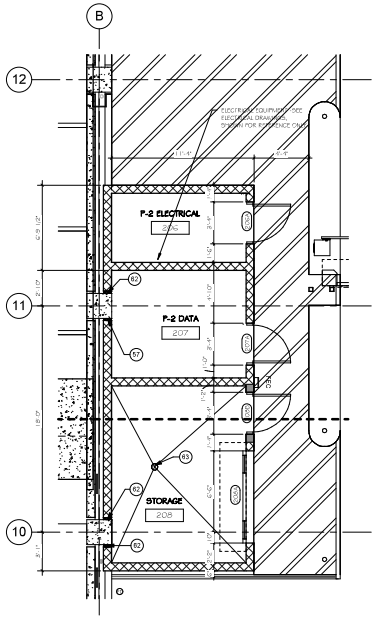
5 ENLARGED TRASH ENCLOSURE PLAN
1/4" = 1'-0"



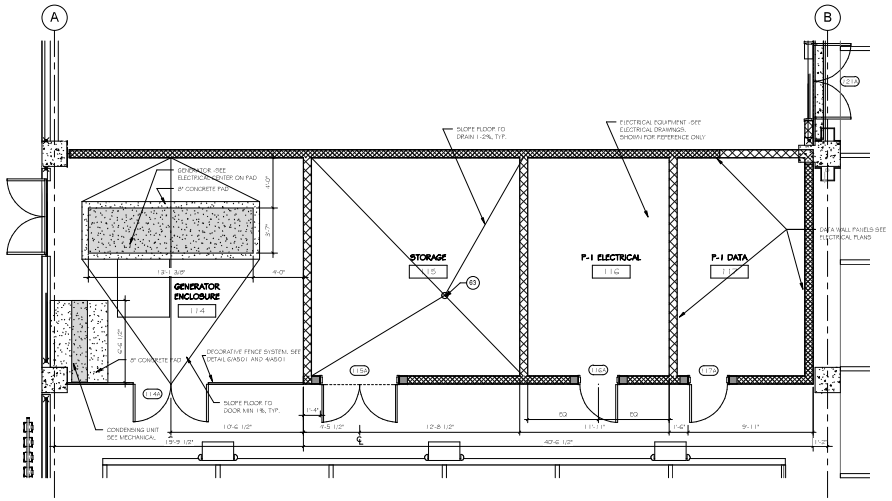
LEVEL 05 DATA & ELECTRICAL ENCLOSURES
6 1/4" = 1'-0"



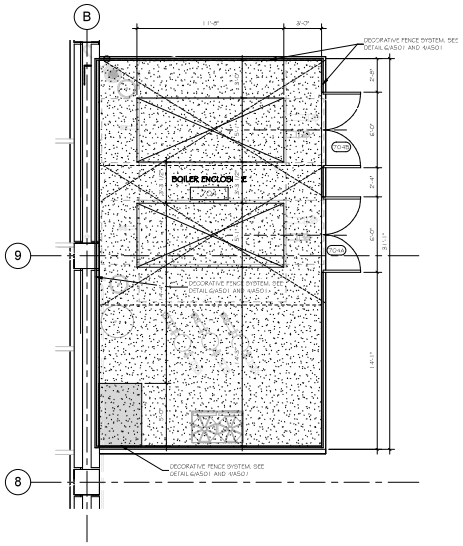
4 ENLARGED PLANTER PLAN
1/4" = 1'-0"



3 Enlarged 2nd Lvl Elec.
1/4" = 1'-0"



2 ENLARGED FIRST LEVEL MECHANICAL ROOMS
1/4" = 1'-0"



1 BOILER ENCLOSURE ENLARGED PLAN
1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. DATUM ELEVATION EQUATION: ELEV. 100'-0" = 4257.70
2. TRAFFIC ARROWS SHOWN ON PLANS ARE FOR REFERENCE ONLY. SEE AS SHEETS FOR PAINTED ARROW GRAPHICS FOR DIRECTIONAL TRAFFIC CIRCULATION.
3. PENETRATIONS THROUGH THE FLOOR SLAB SHALL BE FULLY COORDINATED AND AS SHOWN IN THE DOCUMENTS. ANY PENETRATIONS NOT AS DESIGNED IN THE DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO THE WORK BEING PERFORMED.
4. THE P1 GROUND FLOOR PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 8'-2". THE UPPER LEVELS OF THE PARKING GARAGE SHALL HAVE A CLEAR HEAD HEIGHT OF NOT LESS THAN 7'-2". ALL OVERHEAD BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO THE BUILDING STRUCTURE, PIPING, CONDUIT, LIGHTING AND SIGNAGE SHALL NOT ENCROACH BELOW THE MINIMUM REQUIRED CLEAR HEAD HEIGHT.
5. PROPOSED NEW STREET AND UTILITY WORK TO BE BUILT BY THE OWNER UNDER SEPARATE CONTRACT. IT IS ANTICIPATED THAT THE NEW ROAD WORK SHALL START CONSTRUCTION THREE MONTHS PRIOR TO THE PARKING GARAGE CONTRACTOR'S DATE OF SUBSTANTIAL COMPLETION, AND SHALL ACHIEVE SUBSTANTIAL COMPLETION AT THE SAME TIME AS THE PARKING GARAGE PROJECT. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS AS REQUIRED AND FOR THE MUTUAL BENEFIT OF THE OWNER.
6. ALL EXPOSED COLUMNS TO RECEIVE A 3/4" CORNER CHAMFER ON ALL 4 SIDES.
7. ALL STRIPING ON PLANS IS DIAGRAMMATIC AND REPRESENTS CENTER LINE OF SPACES. SEE AS SHEETS FOR DETAILS OF COLORS, SIZE, LINE DETAILS AND SPECIFIC THICKNESS OF LINES.
8. P-7 SLAB ELEVATIONS REFERENCE TOP OF STRUCTURAL FT OR CIP STRUCTURAL SLAB. FINISH SLAB IS 5.5" HIGHER (1.5" GEOFOAM + 4" STRUCTURAL SLAB)

KEYNOTE LEGEND

#	NOTE
L6	TYPICAL STRIPING SEE AS SHEETS
D0	CONCRETE PLANTER. SEE LANDSCAPE DETAIL LL-LS01
D4	DECORATIVE FENCE SYSTEM. SEE DETAIL 6/A501 AND 4/A501
M1	CONCRETE EVALUCULAR. SEE STRUCTURAL
S7	CALCIUM SILICATE MASONRY UNIT
S2	2" GAP BETWEEN WALL AND CONC COLUMN. CAULK COLUMN BOTH SIDES FULL LENGTH TO STRUCTURE ABOVE
S3	FLOOR DRAIN SEE PLUMBING DRAWINGS. SLOPE SLAB TO DRAIN SEE SLAB ELEVATIONS THIS SHEET FOR SLOPING REQUIREMENTS

FLOOR PLAN LEGEND

- NEW WALLS. SEE WALL TYPES.
- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- TYPICAL DIAGONAL STRIPING SEE AS SHEETS.
- TRAFFIC COATING APPLIED TO CONCRETE SURFACE SEE SPECS FOR PRETREATING AND FINAL APPLICATION
- RETAIL PERIMETER BELOW
- C — DYNOTES COMPACT CAR PARKING STALL. NO STRIPING ON GROUND -SEE SIGNAGE PACKAGE FOR SIGNAGE
- FD — FLOOR DRAIN

STATE OF UTAH
THOMAS S. BRENNAN
97-241-109-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

ENLARGED PLANS

Date OCTOBER 30 2017

A111

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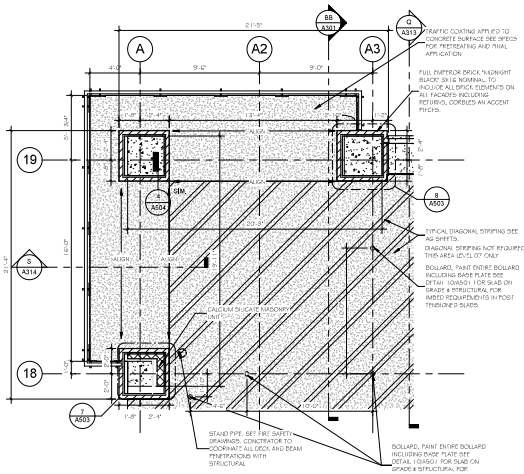
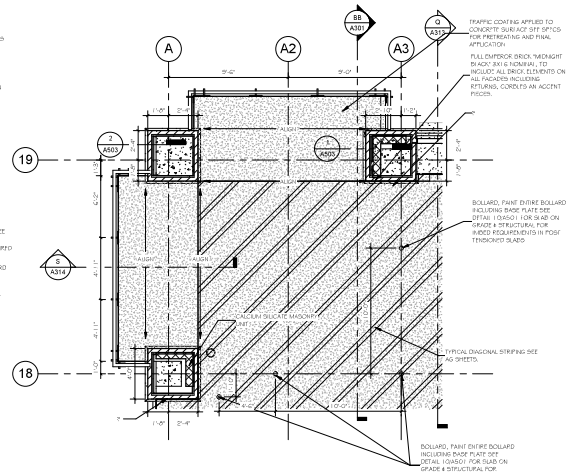
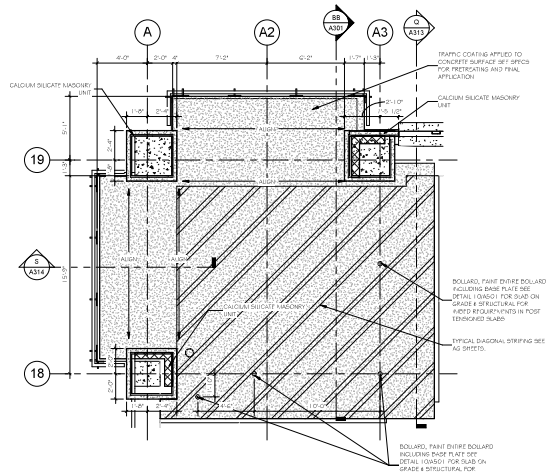
10/26/2017 9:29:01 AM



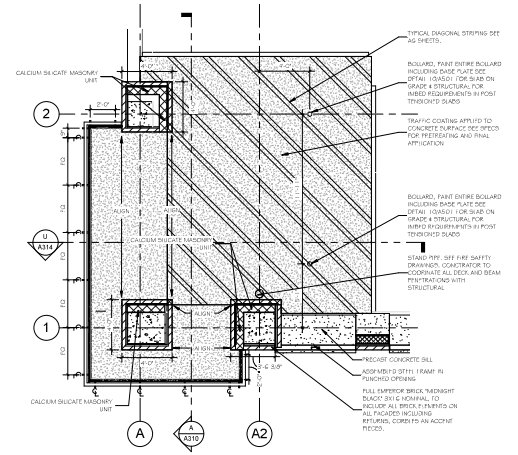
NORTH WEST TOWER LEVELS 04, 05, 06
6 ENLARGED PLAN (07 SIMILAR)
1/4" = 1'-0"



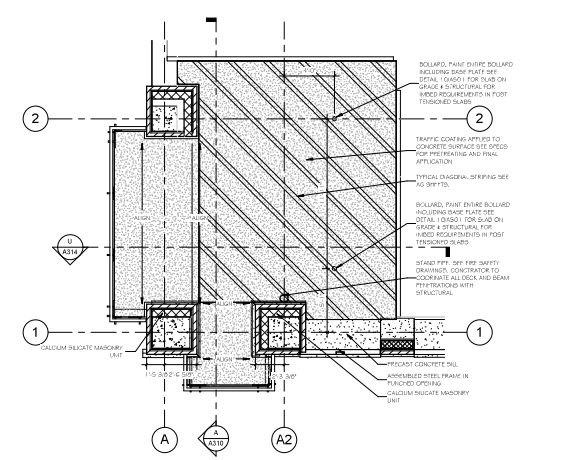
NORTH WEST TOWER LEVEL 03
5 ENLARGED PLAN
1/4" = 1'-0"



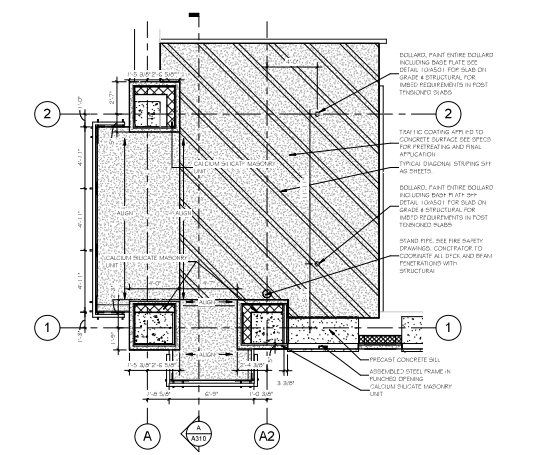
NORTH WEST TOWER LEVEL 02
4 ENLARGED PLAN
1/4" = 1'-0"



SOUTH WEST TOWER LEVELS 04, 05, 06,
3 07 ENLARGED PLAN
1/4" = 1'-0"



SOUTH WEST TOWER LEVEL 03
2 ENLARGED PLAN
1/4" = 1'-0"



SOUTH WEST TOWER LEVEL 02
1 ENLARGED PLAN
1/4" = 1'-0"

STATE OF UTAH
THOMAS S. BRENNAN
97-2411-09-0301
LICENSED ARCHITECT

FAIRBOURNE STATION PARKING STRUCTURE-2017 --- BID SET

2846 S. LEHMAN AVE.
WEST VALLET CITY, UT, 84119

eda

#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GB
PROJECT MANAGER	JP
ARCHITECT PROJECT #	213069-1
OWNER PROJECT #	--

Description	Date

ENLARGED TOWER PLANS

Date OCTOBER 30 2017

A112

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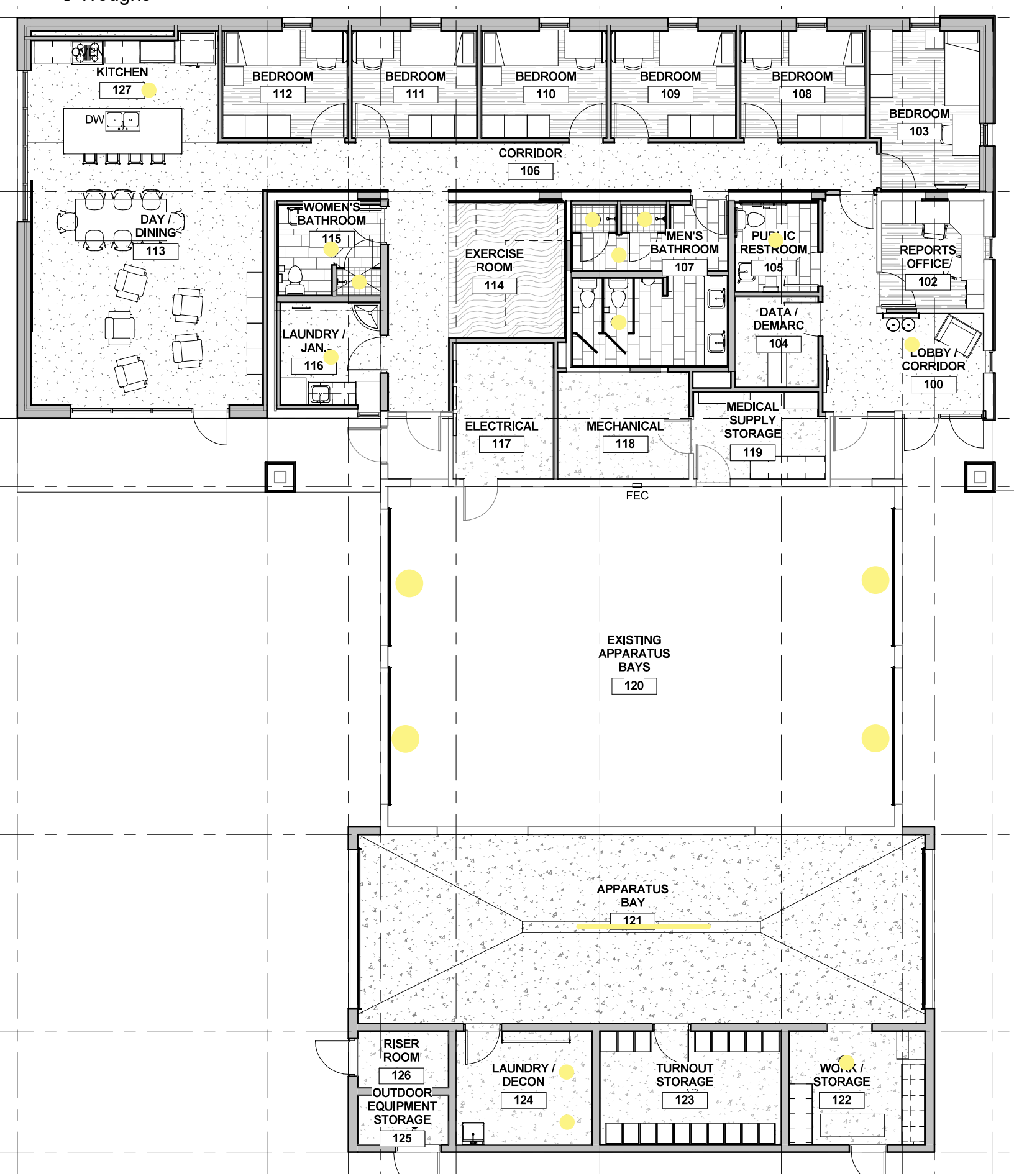
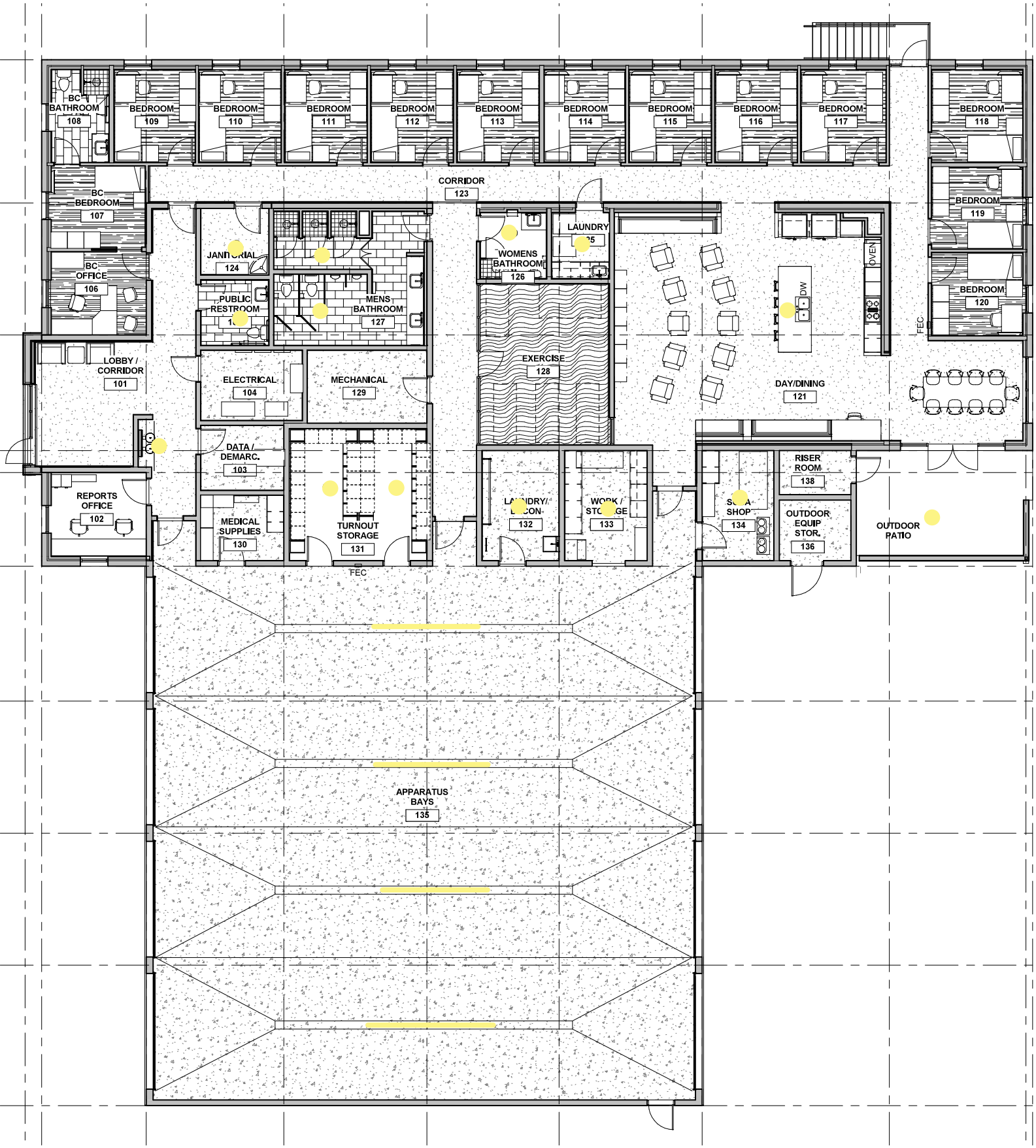
10/26/2017 9:29:06 AM

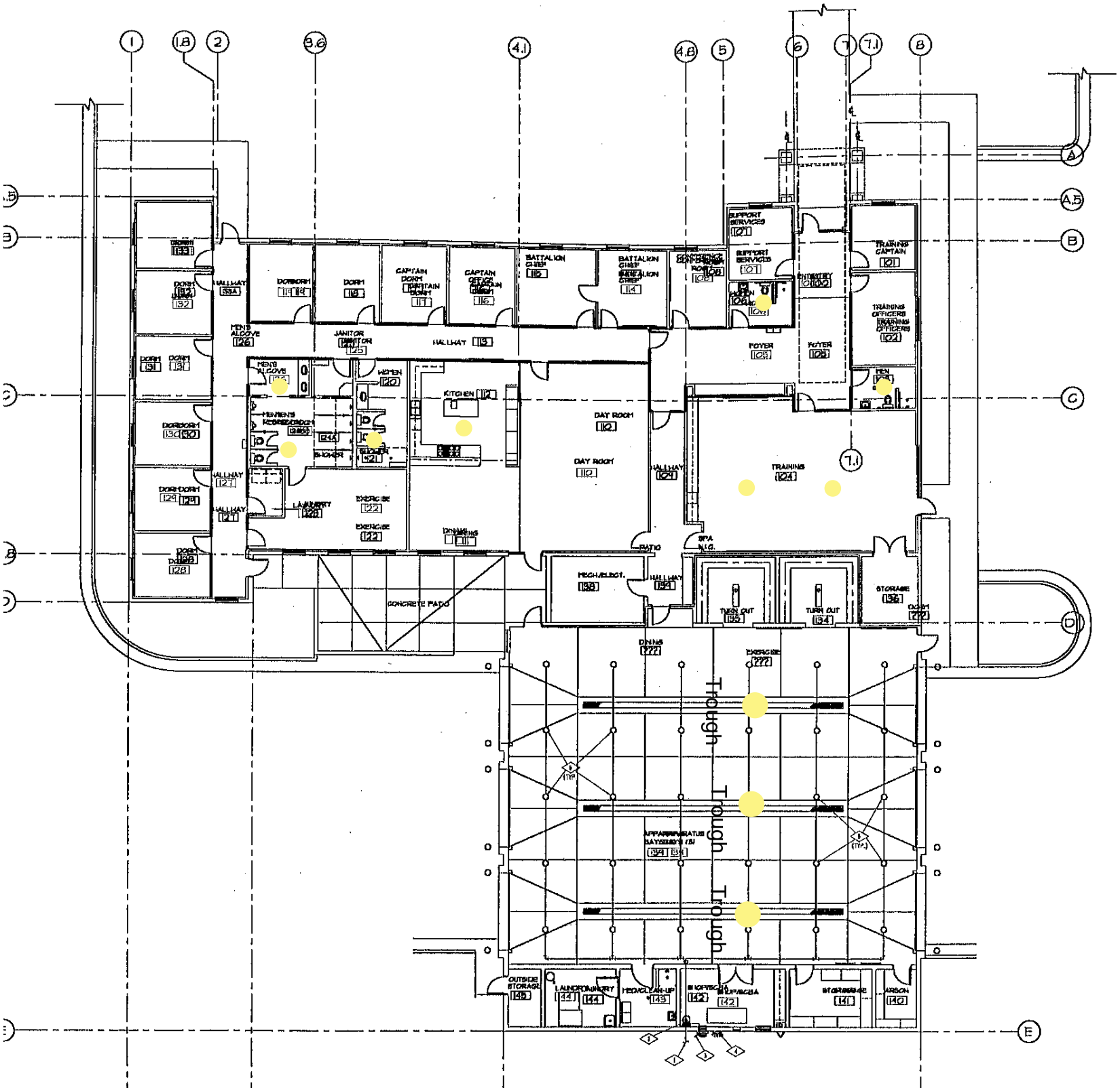
Fire Station #73
3 Floor Drains
3 Troughs

Firestation #71
13 Floor Drains
5 Troughs



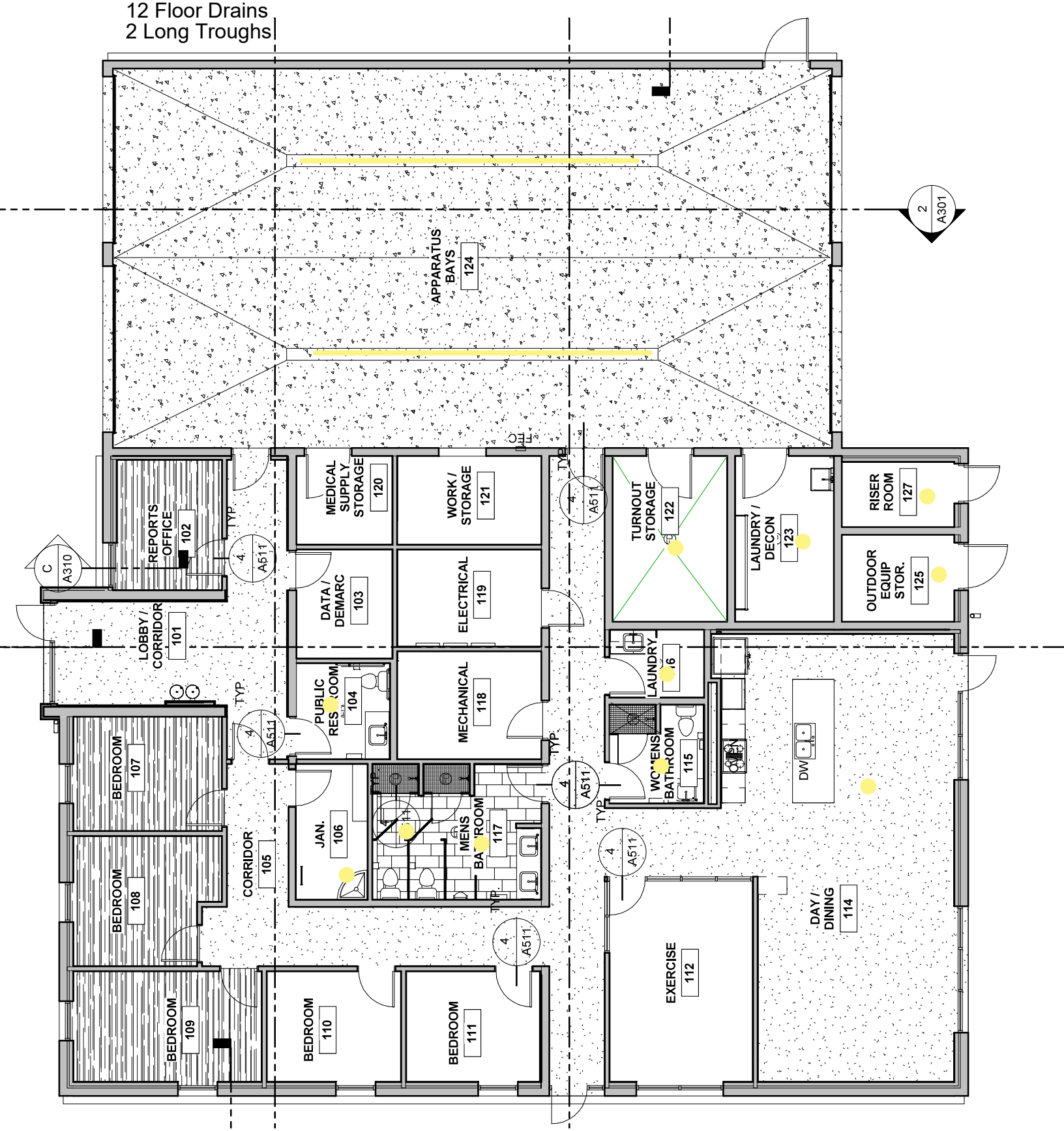
Fire Station #72
16 Drains
4 Troughs



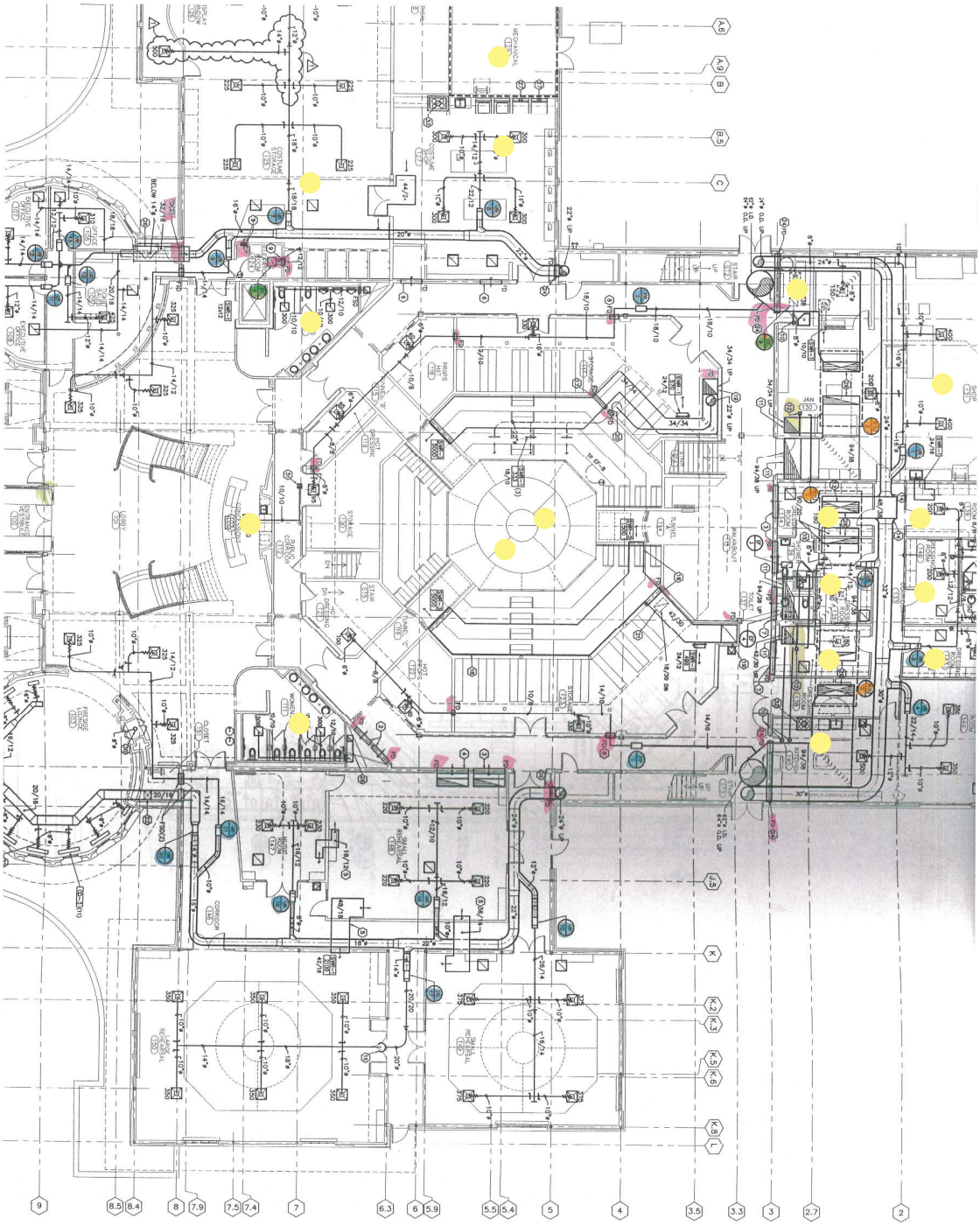

DORM
HALLWAY
DORMORM
DORM
CAPTAIN DORM
CAPTAIN OFFICE
BATTALION CHIEF
SUPPORT SERVICES
TRAINING CAPTAIN
ENTRANCE
TRAINING OFFICERS
MEN'S ALCOVE
JANITOR
HALLWAY
FOYER
MEN
WOMEN
KITCHEN
DAY ROOM
TRAINING
EXERCISE
LAUNDRY
DINING
PATIO
SPA
MECH/ELECT.
TURN OUT
STORAGE
CONCRETE PATIO
Trough
Trough
Trough
OUTSIDE STORAGE
LAUNDRY
MED/CLEAN-UP
SHOP/SCBA
ARSON

Fire Station #76

12 Floor Drains
2 Long Troughs



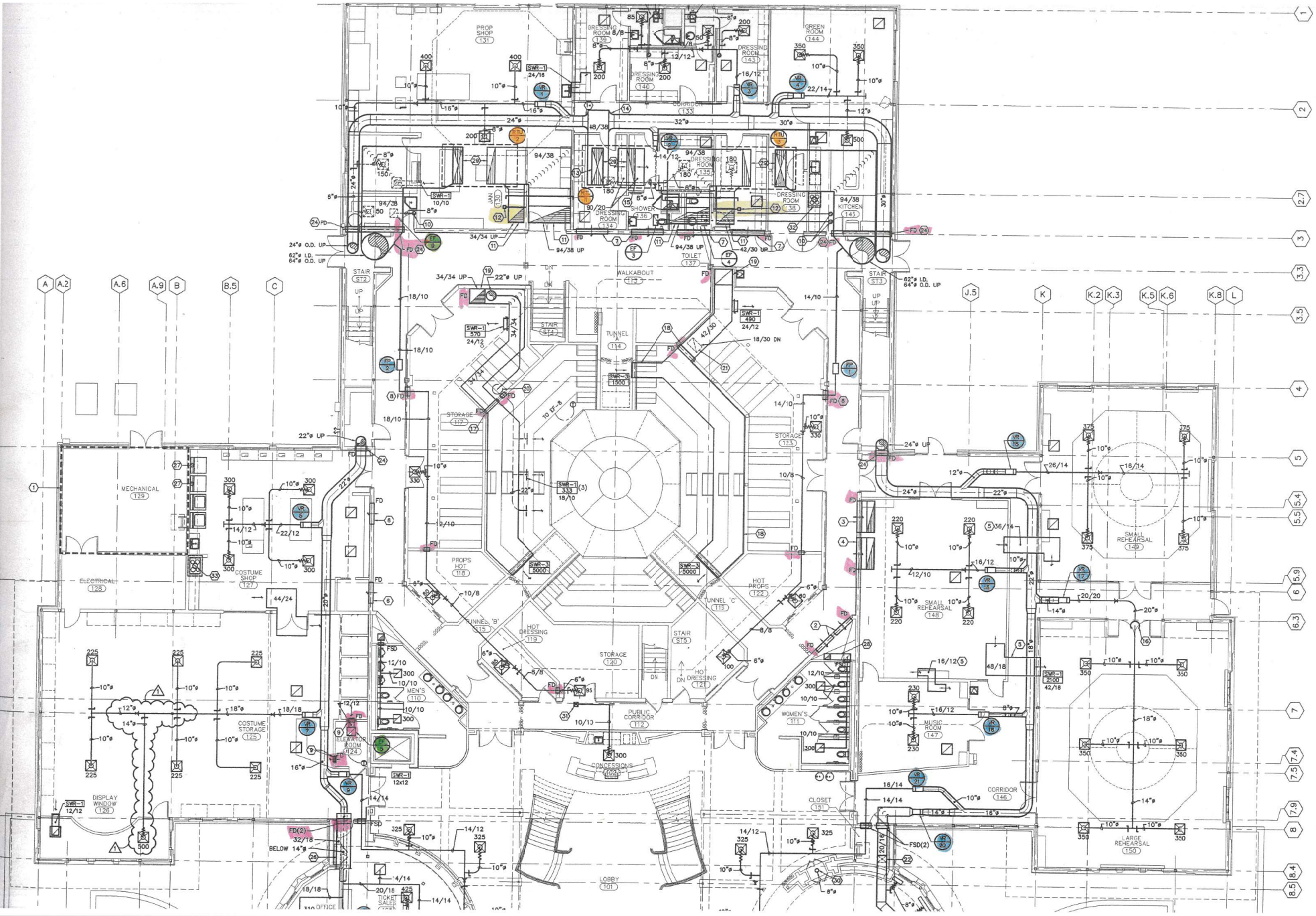
Harman Hall
17 Floor Drains



KEYED NOTES

1. FOR MECHANICAL ROOM LAYOUT REFER TO 1/4" SCALE PLAN SHEET M201.
2. TWO 48"x48" TRANSFER AIR OPENINGS WITH FIRESMOKE DAMPER.
3. 72"x14" TRANSFER AIR DUCT WITH SOUND BOOT AND TYPE "A" FIRE DAMPER.
4. 72"x14" TRANSFER AIR DUCT WITH SOUND BOOT AND TRANSFER AIR GRILLE.
5. 48"x14" RETURN AIR OPENING WITH TYPE "A" FIRE DAMPER.
6. 72"x14" RETURN AIR OPENING WITH TYPE "A" FIRE DAMPER.
7. PROVIDE 1.0 SQ.FT. TRANSFER AIR OPENING WITH TYPE "B" FIRE DAMPER.
8. LOCATE EXHAUST FLUE A MINIMUM 10 FEET FROM ADJACENT BUILDING AIR INTAKES.
9. RUN DUCT THRU ROOF TRUSSES. PROVIDE MATCH SHEET METAL PARTITION AROUND STRUCTURE.
10. MOTORIZED ATC DAMPER.
11. TRANSITION FROM ROOFTOP DISCHARGE OUTLET TO 48"x48".
12. PROVIDE BELL MOUTH FITTING.
13. TRANSITION FROM BELL MOUTH TO RETURN AIR INLET TO SOUND BOOTS AS SHOWN.
14. RISE DUCT TO RUN TIGHT TO STRUCTURE IN SPACE.
15. FLEXIBLE DUCTWORK WITH LINED DUCT. PROVIDE MAGNA SOUND OR EQUAL SOUND BOOTS FOR DUCTS SERVING DUCT SHAFT. SEE DETAIL 5/M201. DUCTS SHALL BE RECTANGULAR, ROUND OR OVAL DUCT SHAPE AND SIZE.
16. PROVIDE FIRE DAMPER AT FLOOR PENETRATION.
17. DROP DUCTWORK DOWN AS SHOWN.
18. TYPE "B" FIRE DAMPER.
19. EXHAUST DUCTS OFF OF BOTTOM OF 48"x20 DUCTS THRU PROVIDE FIRE DAMPER AND BLANKOFF DAMPER. EXHAUST DUCT PENETRATION AND SCREEN AT END OF OPEN DUCT.
20. TRANSITION DUCT UP AND SLOPE TO RUN DUCT OVER OF FLEXIBLE DUCT INTO SIDE OF PLENUM TYP.
21. DIFFUSER PLENUM HEIGHT TO ACCOMMODATE CONNECTION WITH STRUCTURE. COORDINATE LOCATION OF REDIF
22. TYPE "B" FIRE DAMPER.
23. RUN EXHAUST DUCTWORK IN BASEMENT. RUN DUCT AT HIGH AS POSSIBLE IN BASEMENT.
24. RUN DYER VENT TO ROOF CAP. SIZE PER MANUFACTURER RECOMMENDATIONS.
25. TRANSITION DUCT BETWEEN STRUCTURE. COORDINATE CONTINUATION.
26. RUN DUCT UP BETWEEN STRUCTURE. COORDINATE WITH STRUCTURE. PROVIDE SOUND BOOTS.
27. RUN DUCTWORK IN SHAFT. SEE SHEET M102 FOR CONTINUATION.
28. FRESH AIR FLUE. TRANSITION FLUE TO RISE UP SHAFT IN SUPPLY FROM 204. SEE SHEET M102
29. 10/10 DUCT UP. SEE SHEET M102 FOR CONTINUATION.
30. RANGE HOOD VENT TO ROOF. SIZE PER MANUFACTURERS RECOMMENDATIONS.
31. PROVIDE ROOF SCUPPERS AND DOWNSPOUTS. SIZE AND LOCATION ARE TO BE REVISED. SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS.

1. ALL DUCTWORK IS 1000 UNLESS SHOWN AS SUCH OTHERWISE NOTED. ALL DUCTWORK TO BE SHEET METAL. PROVIDE SOUND BOOT PER DETAIL 5/M201.
2. ALL RETURN EXHAUST GRILLES SHOWN AS SUCH ARE TO BE 1000 CFM, ON AS NOTED UNLESS OTHERWISE NOTED.
3. DUCTS AND PIPES SHALL NOT BE RUN ABOVE ELECTRICAL EQUIPMENT. PROVIDE ADEQUATE SPACE FOR ACCESS. ACCESS SPACE IN FRONT OF PANELS 4'-0" WIDE AND 7'-0" HIGH. DUCTS AND PIPES SHALL NOT BE RUN ABOVE ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
4. ALL DUCTS LOCATIONS OF CEILING DIFFUSERS, GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
5. REFER TO REHEAT BOX DETAIL 5/M201, 16/M201, & 17/M201.
6. PROVIDE TO FIRE DAMPER IN FIRESMOKE DAMPER DETAIL 7/M201.
7. ALL DUCT DIMENSIONS ARE OUTSIDE DIM. FOR RECTANGULAR DUCTS. INSIDE DIM. FOR ROUND AND OVAL DUCTS UNLESS OTHERWISE NOTED.
8. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE DUCTS, PIPES, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILING.
9. ALL DUCT AND FLUE PENETRATIONS THRU 1 HOUR ROOF ASSEMBLY TO BE SEALED WITH 3 SHEET ROCK LAYERS OF 5/8" ROCK AT BOTTOM OF ROOF TRUSSES TO ROOF DECK.
10. RUN EXPOSED DUCTWORK AS HIGH AS POSSIBLE.
11. ALL FIRE DAMPERS ARE TYPE "B" UNLESS OTHERWISE NOTED.
12. ALL DUCTWORK TO BE SHEET METAL EXCEPT FLEXIBLE DUCTS. VANES MUST BE USED.
13. NOT ALL DUCTWORK IS SHOWN. 90° ELBOWS WITH TURNING VANES MUST BE USED.



1. ALL CEILING DIFFUSERS CD-1, CFM AS NOTED. REFER TO DETAIL 1/M
2. ALL CEILING RETURN G SHALL BE RG-1 UNLES PROVIDE SOUND BOOT
3. ALL CEILING EXHAUST SHALL BE EG-1, CFM WISE NOTED.
4. DUCTS AND PIPES SHA PANELS. ALL ELECTRIC ACCESS SPACE IN FRO 6'-6" HIGH. DUCTS AN ELECTRICAL ROOMS, EX THE ROOM.
5. COORDINATE EXACT LO GRILLES WITH ARCHITEC
6. REFER TO REHEAT BOX 17/M501.
7. REFER TO FIRE DAMPER 7/M501.
8. ALL DUCT DIMENSIONS DUCTS. INSIDE DIM. FOR OTHERWISE NOTED.
9. ALL FIRE DAMPERS SHO OTHERWISE NOTED.
10. PROVIDE CEILING ACCES MECHANICAL EQUIPMENT PERS, ETC. ARE LOCATE
11. ALL DUCT AND FLUE PE ASSEMBLY TO BE ENCL FROM SHEET ROCK AT ROOF DECK.
12. RUN EXPOSED DUCTWOR
13. ALL FIRE DAMPERS ARE NOTED.
14. FOR ROUND DUCTWORK NOT BE ACCOMMODATED VANES MUST BE USED.

KEYED

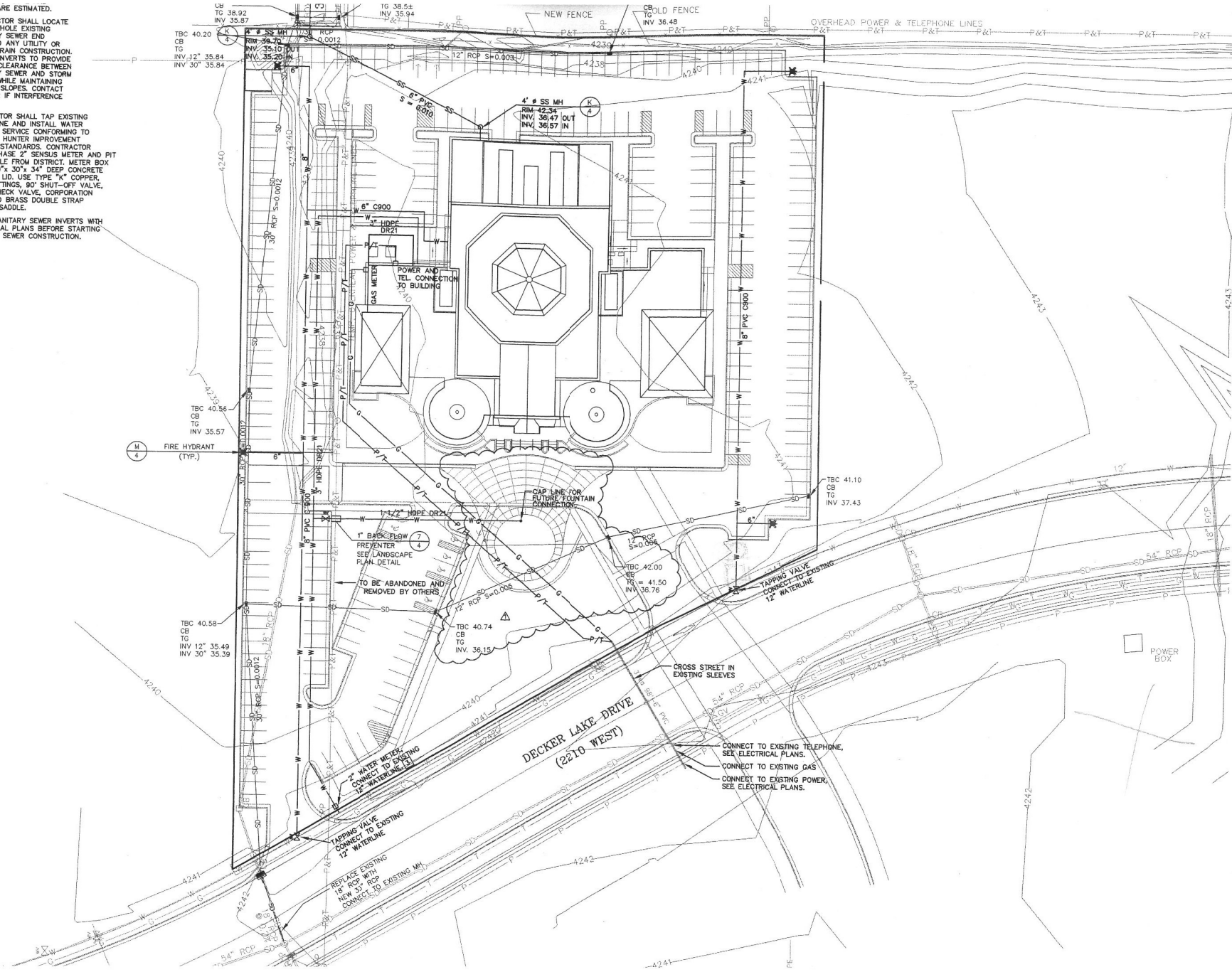
1. FOR MECHANICAL ROO PLAN SHEET M301.
2. TWO 48"x18" TRANSFE DAMPERS.
3. 72"x16" TRANSFER AIR TYPE "A" FIRE DAMPE
4. 72"x16" TRANSFER AIR TYPE "A" FIRE DAMPER
5. TRANSFER AIR DUCT.
6. 48"x16" RETURN AIR O DAMPER.
7. 72"x16" RETURN AIR O DAMPER.
8. TYPE "A" FIRE DAMPER
9. PROVIDE 1.0 SQ. FT. T "B" FIRE DAMPER.
10. LOCATE EXHAUST FLUE ROOFTOP UNIT FRESH
11. RUN DUCT THRU ROOF METAL PARTITION AROU
12. MOTORIZED ATC DAMPE
13. TRANSITION FROM ROO A 48/38 PLENUM.
14. PROVIDE BELL MOUTH
15. TRANSITION FROM ROO SOUND BOOTS AS SHO
16. RISE DUCT TO RUN TIG
17. EXTEND 34/34 DUCT T PLENUM UNDER SEATIN DUCT SHAPE AND SIZE.
18. EXTEND 42/40 DUCT T UNDER SEATING. DUCT SHAPE TO FIT UNDER S
19. PROVIDE FIRE DAMPER
20. DROP DUCT DOWN INTO HIGH AS POSSIBLE IN E
21. EXTEND DUCTS OFF OF SLAB TO PROVIDE TRAN PROVIDE FIRE DAMPER FLOOR PENETRATION AM DUCT.
22. TRANSITION DUCT UP A LOUNGE CEILING. COOR WITH STRUCTURE.
23. DIFFUSER PLENUM HEIG OF FLEXIBLE DUCT INTO
24. TYPE "B" FIRE DAMPER
25. THERMOSTAT FOR BASE BELOW. MOUNT ON ST GRIDS LINES F.4 AND 4
26. RUN RETURN DUCT BET WITH STRUCTURE.
27. RUN DRYER VENT TO R MANUFACTURERS RECOM
28. TRANSITION DUCT IN SH CONTINUATION.

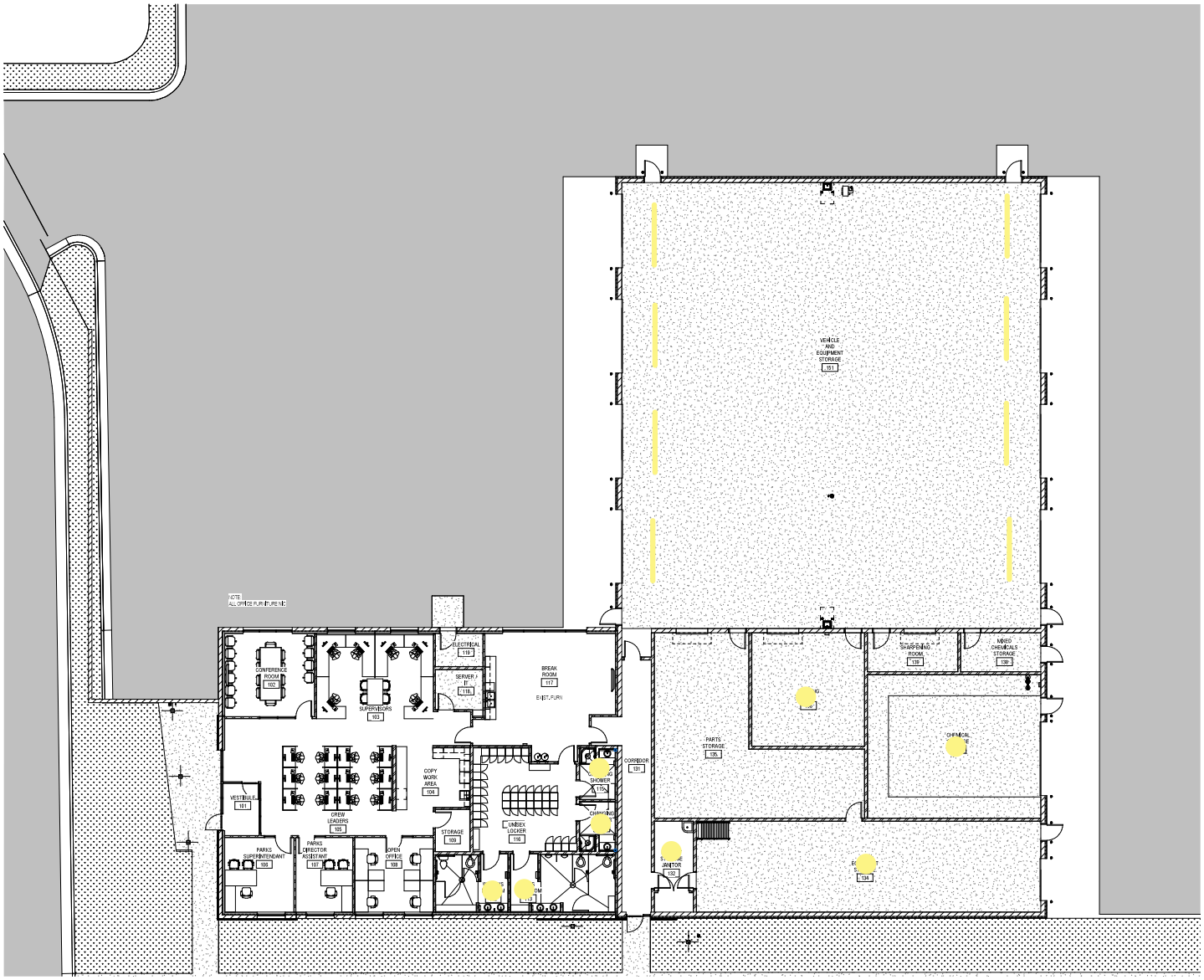
INVERT ARE ESTIMATED.

2. CONTRACTOR SHALL LOCATE AND POTHOLE EXISTING SANITARY SEWER END PRIOR TO ANY UTILITY OR STORM DRAIN CONSTRUCTION. ADJUST INVERTS TO PROVIDE 6" MIN. CLEARANCE BETWEEN SANITARY SEWER AND STORM DRAINS WHILE MAINTAINING MINIMUM SLOPES. CONTACT ENGINEER IF INTERFERENCE EXISTS.

3. CONTRACTOR SHALL TAP EXISTING WATER LINE AND INSTALL WATER METER & SERVICE CONFORMING TO GRANGER HUNTER IMPROVEMENT DISRTICT STANDARDS. CONTRACTOR TO PURCHASE 2" SENSUS METER AND PIT LID MODULE FROM DISTRICT. METER BOX TO BE 30"x 30"x 34" DEEP CONCRETE WITH 30" LID. USE TYPE "K" COPPER, FLARE FITTINGS, 90° SHUT-OFF VALVE, ANGLE CHECK VALVE, CORPORATION STOP AND BRASS DOUBLE STRAP TAPPING SADDLE.

4. VERIFY SANITARY SEWER INVERTS WITH MECHANICAL PLANS BEFORE STARTING SANITARY SEWER CONSTRUCTION.





1 AE131 FURNISHINGS PLAN
SCALE 1/8" = 1'-0"

NORTH

GENERAL NOTES:

1. FURNISHING PLAN HAS BEEN PROVIDED FOR COORDINATION ONLY. FURNISHINGS BY OWNER UNDER OTHER CONTRACT.

KEY NOTES:

CONFORMED DOCUMENT NOTICE:
These Conformed Documents are not the Contract Documents. The Contract Documents are those dated January 16, 2019 along with addenda 1 through 4.
Differences may exist between said Conformed Documents and the Contract Documents. In the event that a conflict arises between the Conformed Documents and the Contract Documents the Contract Documents shall govern. By your use of these Conformed Documents, you are not relieved of your duty to fully comply with the Contract Documents.

Conformed Drawing Set 3/15/2019

JRCA ARCHITECTS
577 South 200 East
S L C, Utah 84111
ph: (801) 533-2100
jrcadesign.com

WEST VALLEY CITY, PARKS DEPARTMENT
6750 WEST PARKWAY BLVD. (2220 S.)
WEST VALLEY CITY, UTAH 84119

PROJECT #: 15048

	DATE	REMARKS
3		CONFORMED DRAWINGS SET 03/15/19
4	01/28/19	CITY REVIEW COMMENTS

LICENSED ARCHITECT
JAMES R. CHILD
No. 120681-0301
STATE OF UTAH

FURNISHINGS PLAN

AE131

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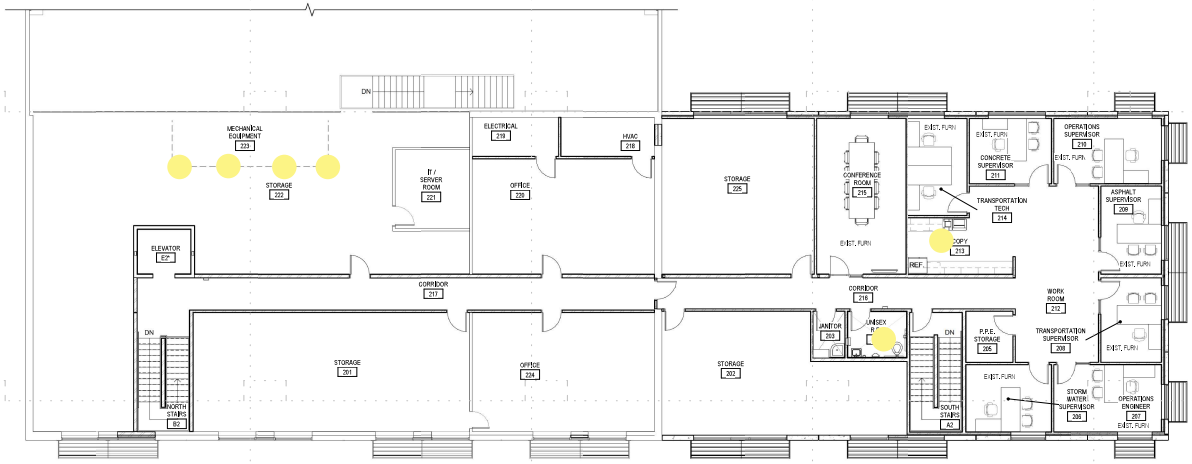
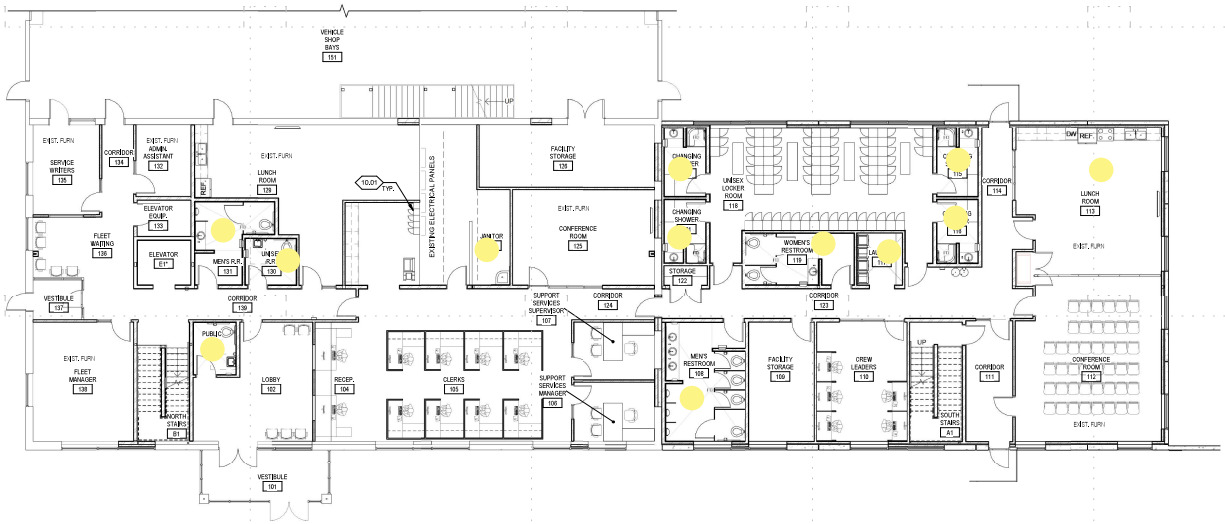


C5 AE131 OFFICES - FURNITURE PLAN - UPPER LEVEL

SCALE 1/8" = 1'-0"



A5 AE131 OFFICES - FURNITURE PLAN - MAIN LEVEL

SCALE 1/8" = 1'-0"

KEY NOTES:

10.01 12" X 12" DOUBLE LOCKER

Public Works Operations Office Space
18 Floor Drains

CONFORMED DOCUMENT NOTICE:
These Conformed Documents are not the Contract Documents. The Contract Documents are those dated January 8, 2019 along with addenda 1 through 4.
Differences may exist between said Conformed Documents and the Contract Documents. In the event that a conflict arises between the Conformed Documents and the Contract Documents the Contract Documents shall govern. By your use of these Conformed Documents, you are not relieved of your duty to fully comply with the Contract Documents.

Conformed Drawing Set 3/15/2019

JRCA ARCHITECTS
577 South 200 East
S L C, Utah 84111
ph: (801) 533-2100
jrcadesign.com

PUBLIC WORKS OFFICE/STORAGE BUILDING

2805 SOUTH 3600 WEST
WEST VALLEY CITY, UTAH 84119

PROJECT #: 15048

CONFORMED DRAWING SET 03/15/19

△	DATE	REVISION

LICENSED ARCHITECT JAMES R. CHILD No. 120681-0301 STATE OF UTAH

OFFICES - FURNISHINGS PLANS

AE131

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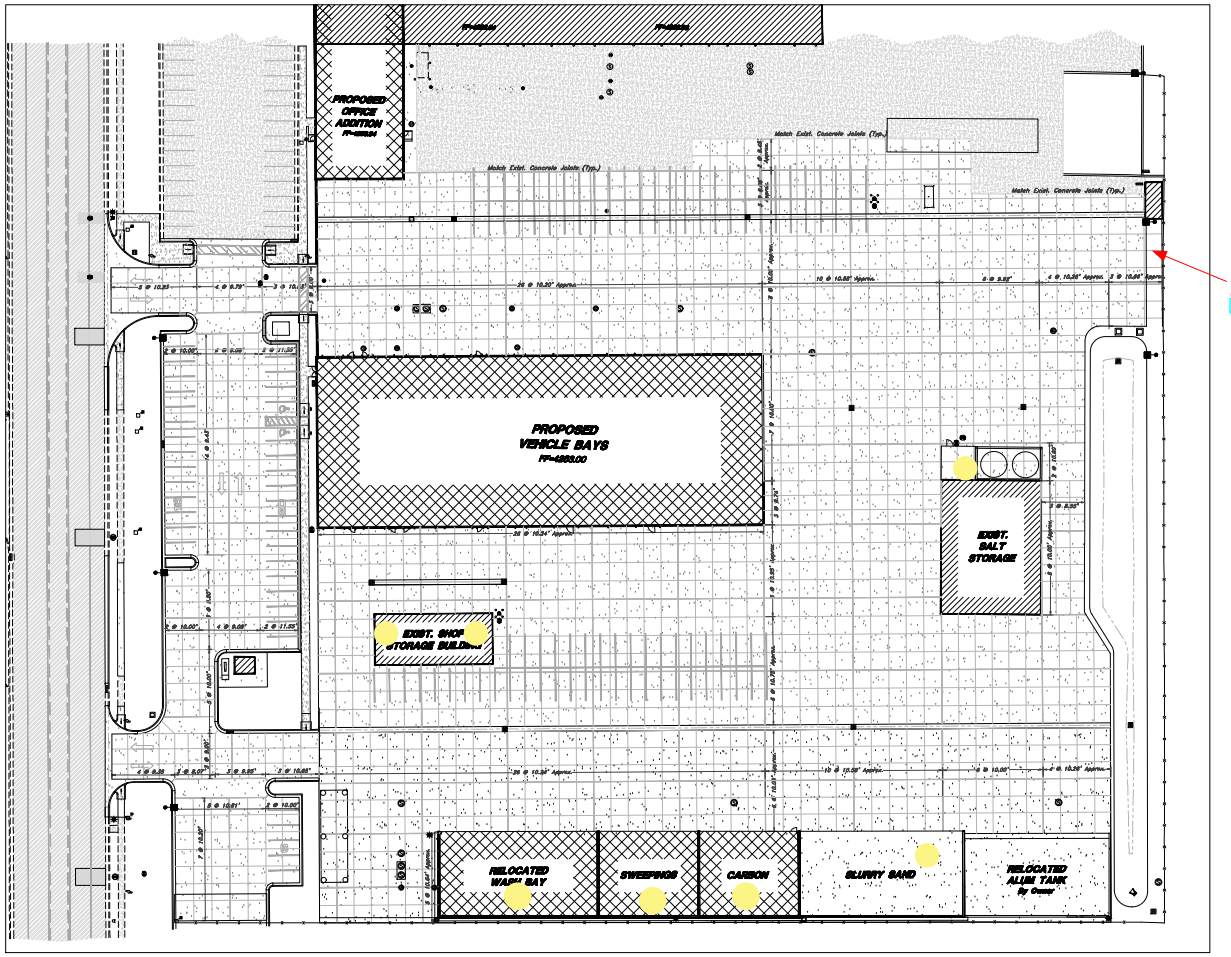
Conformed Drawing Set 3/15/2019



20' landscape setback along entire east edge. See L101 and AS101

Scale 1" = 30'

Graphic Scale

Legend

(Notes: All items may not appear on drawing)

San. Sewer Manhole	
Water Manhole	
Storm Drain Manhole	
Cleanout	
Electrical Manhole	
Catch Basins	
Exist. Fire Hydrant	
Fire Hydrant	
Exist. Water Valve	
Water Valve	
Sanitary Sewer	
Sanitary Sewer	
Gas Line	
Irrigation Line	
Storm Drain	
Telephone Line	
Secondary Waterline	
Fiber Line	
Pipe Line	
Land Drain	
Power pole	
Power pole w/guy	
Light Pole	
Fence	
Flowline of ditch	
Overhead Power line	OHP
Corrugated Metal Pipe	CMP
Concrete Pipe	CP
Reinforced Concrete Pipe	RCP
Nordic Tree	N
Polyvinyl Chloride	PVC
Top of Asphalt	TA
Edge of Asphalt	EA
Centerline	CL
Finish Floor	FF
Top of Curb	TC
Top of Wall	TWL
Top of Walk	TW
Top of Concrete	TCN
Finish Grade	FG
Finish Surface	FS
Match Existing	ME
Fire Department Connection	FDC
Finish Contour	90
Exist. Contour	90
Finish Grade	95.33TA
Exist. Grade	95.73TA
Edge Line	E
Direction of Flow	
Existing Asphalt	
New Asphalt	
Heavy Duty Asphalt	
Existing Concrete	
New Concrete	
Split Curb & Gutter	
Demo Tree	

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
1-800-662-4111

Public Works Operations Facility
4 Floor Drains
3 Troughs

CONFORMED DOCUMENT NOTICE:
These Conformed Documents are not the Contract Documents. The Contract Documents are those dated January 8, 2019 along with addenda 1 through 4. Differences may exist between said Conformed Documents and the Contract Documents. In the event that a conflict arises between the Conformed Documents and the Contract Documents the Contract Documents shall govern. By your use of these Conformed Documents, you are not relieved of your duty to fully comply with the Contract Documents.

JRCA ARCHITECTS
577 South 200 East
S.L.C, Utah 84111
ph: (801) 533-2100
jrcadesign.com

GREAT BASIN ENGINEERING
5746 South 1475 East Ogden, Utah 84403
Phone: (801) 394-5211 Fax: (801) 394-5244
WWW.GREATBASINENGINEERING.COM

PUBLIC WORKS OFFICE/STORAGE BUILDING
2805 SOUTH 3600 WEST
WEST VALLEY CITY, UTAH
84119

PROJECT #: 15048

Conformed Set 3/15/19

	DATE	REVISION
1	5/30/18	WVC PLAN REVIEW COMMENTS

Professional Engineer No. 5339972 Christian Michaelson State of Utah 8/21/18

CONFORMED SET March 15, 2019

CONCRETE SITE PLAN

C6.00

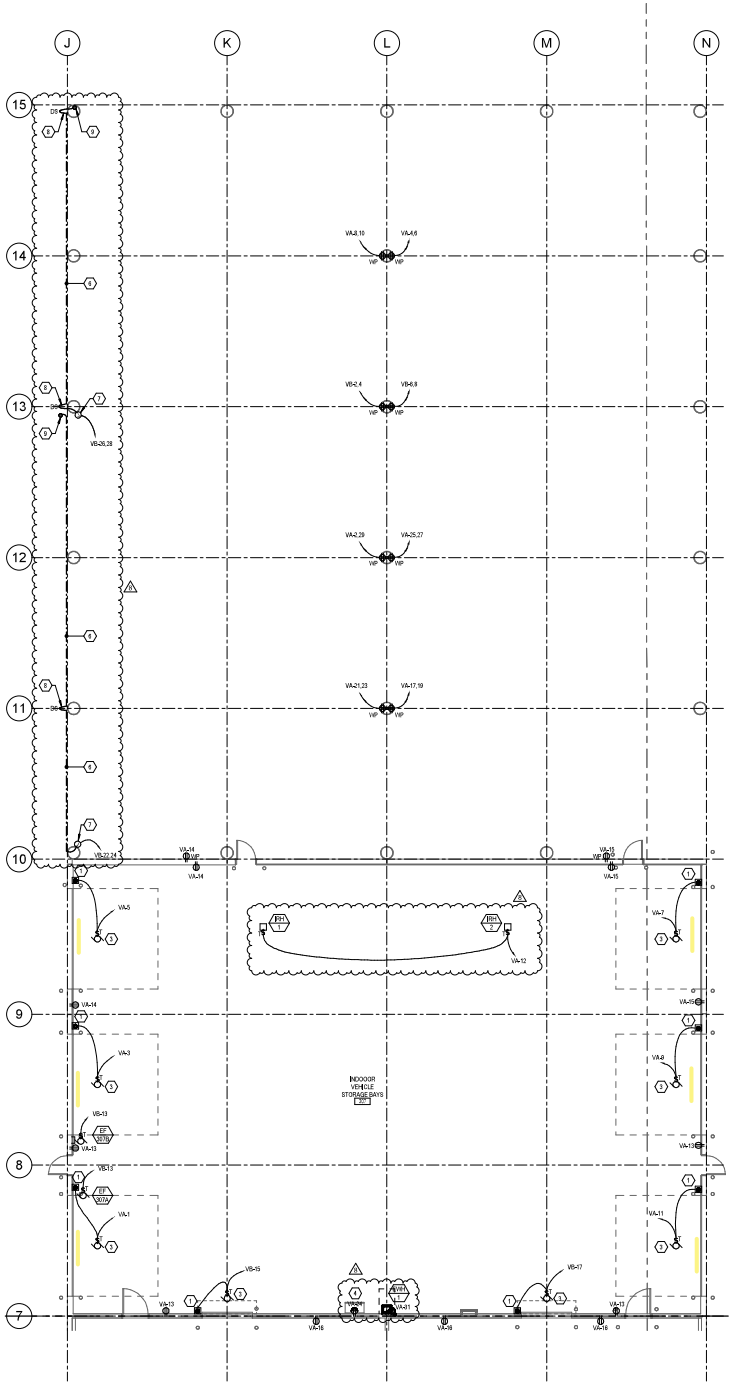
C6.00 CONCRETE SITE PLAN
SCALE 1" = 30'-0"

11/22/2017 1:29:31 PM C:\Users\jherrera\Documents\JRCA Projects\15048 - West Valley Public Works_Central_V17_jrh@jrcadesign.com.rvt

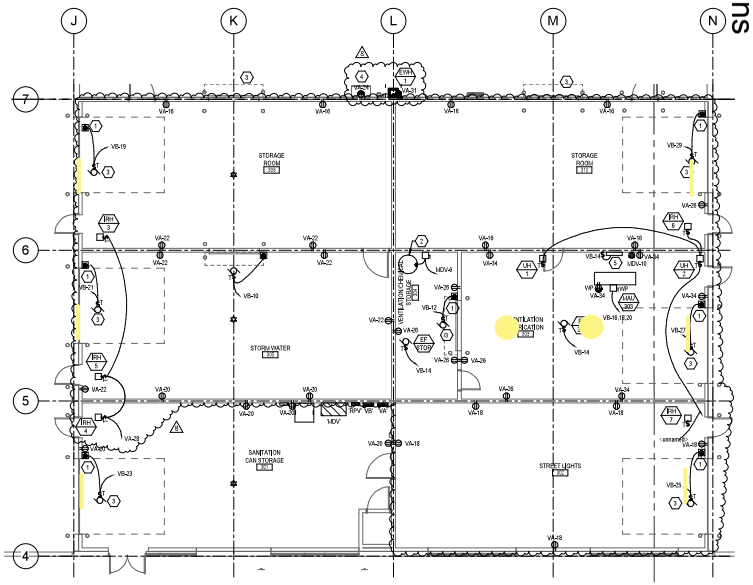
SHEET KEYNOTES

1. INSTALL CONTROL STATION. FURNISHED BY DOOR HARDWARE CONTRACTOR.
2. OWNER FURNISHED AIR COMPRESSOR 5 HP 208V 10- VERIFY ROUGH-IN REQUIREMENTS WITH OWNER.
3. OVER HEAD DOOR PROVIDED BY OTHERS AND WIRED BY DIVISION 26.
4. OWNER FURNISHED ICE MACHINE.
5. 50A-4P NO CONTACTOR WITH 120V COIL MOUNTED IN NEMA 1 ENCLOSURE AT +6'-0". CONTACTOR TO CONTROL CIRCUITS MDV-10 AND VB-14 SERVING EF-303, CONTROL CONTACTOR WITH TOGGLE SWITCH SHOWN.
6. RAYCHEM GM-2XT SELF-REGULATING HEATING CABLE. POWER OUT PUT TO BE 12W/FT.
7. LOCATE JUNCTION BOX TO UNDERSIDE OF STRUCTURE.
8. LOOP CABLE IN DOWN SPOUT. PROVIDE DOWN SPOUT HANGER.
9. PROVIDE END CAP ON END OF RUN.

Public Works Operations Storage
2 Floor Drains
12 Troughs



EAST STORAGE BAY POWER PLAN
SCALE = 1/8" = 1'-0"



WEST STORAGE BAY POWER PLAN
SCALE = 1/8" = 1'-0"

JRCA ARCHITECTS
577 South 200 East
S L C, Utah 84111
ph: (801) 533-2100
jrcadesign.com

WEST VALLEY CITY - PUBLIC WORKS
OFFICE/STORAGE BUILDING
2805 SOUTH 3600 WEST
WEST VALLEY CITY, UTAH 84119

PROJECT #: 15-048

#	DATE	REVISION
	CONFORMED SET 3/14/2019	
E	3/30/20	PR #623

BRENT BICKS STATE OF UTAH PROFESSIONAL ENGINEER
01/12/2018

NOT FOR CONSTRUCTION

STORAGE BAYS POWER PLAN

EP302

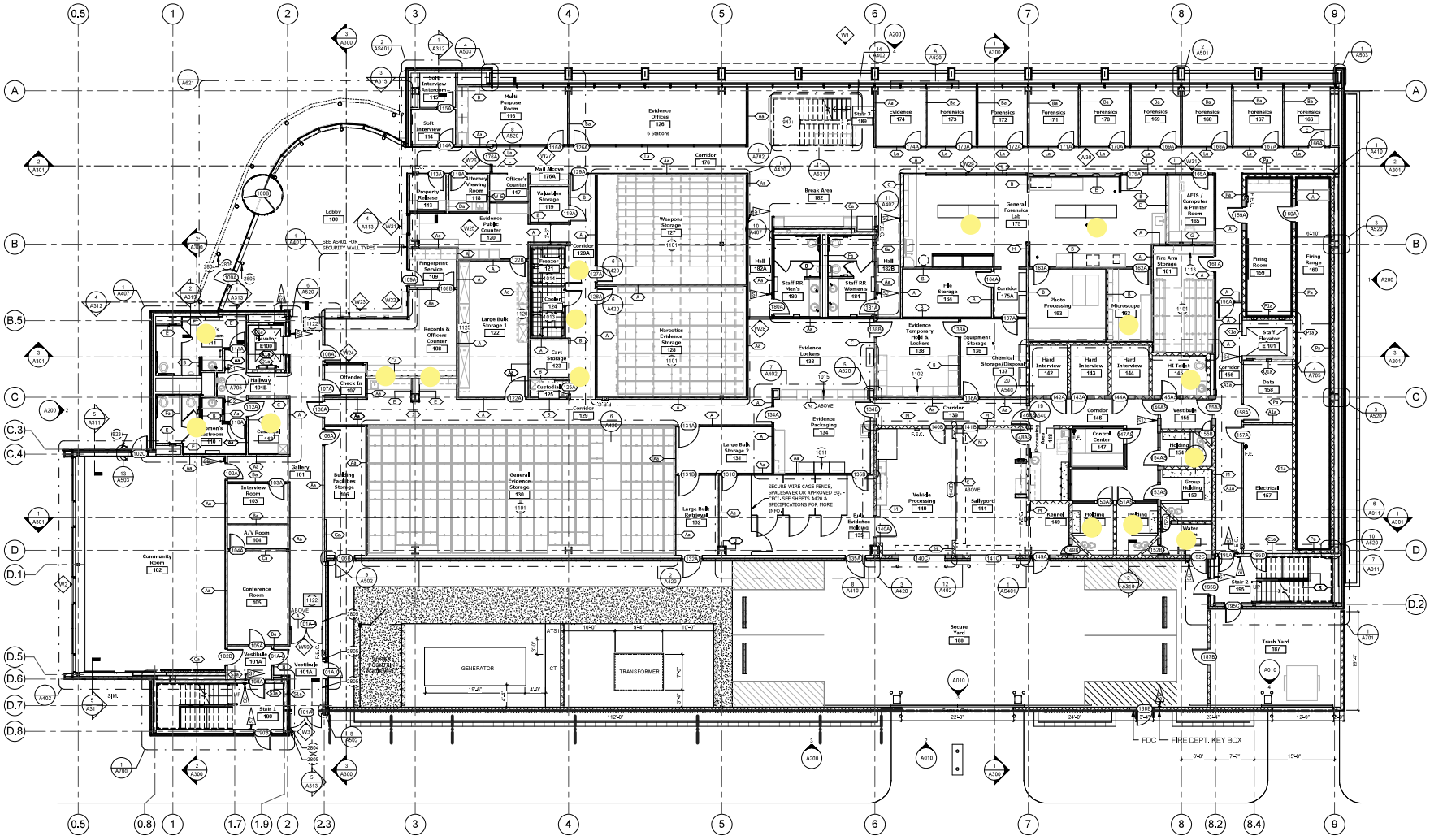
D:\Autodesk\User Files\Revit 2019\16286 West Valley Public Works Elec v19_calvin@bnaconsulting.com.rvt

GENERAL PLAN NOTES

1. SEE SHEET A800 FOR WALL TYPES.
2. SEE SHEET A810 FOR DOOR SCHEDULES
3. SEE SHEET G004 FOR LOCATIONS OF FIRE RATED WALLS.
4. SEE SHEETS AS401, AS800 & AS801 FOR SECURITY WALL LOCATIONS AND DETAILS. SECURITY DOORS, FRAMES, GLAZING, EQUIPMENT, FURNISHINGS, AND DETAILS
5. ALL EXPOSED INTERIOR CMU CORNERS SHALL BE BULLNOSED
6. SEE SHEETS A820 & A821 FOR EXTERIOR WINDOW TYPES.
7. SEE SHEETS A830 & A831 FOR INTERIOR WINDOW TYPES.

KEYED NOTES

823	8'X8' FLUSH MOUNTED ACCESS DOOR, TO MATCH WALL PANEL TYPE 2
947	FRAMED PLATFORM UNDERNEATH STAIR
1011	EVIDENCE DRYING CAB - CFCI, SEE SHEET A420 FOR TYPES AND SIZES
1013	WALK IN COOLER PACKAGED UNIT - CFCI
1014	WALK IN FREEZER PACKAGED UNIT - CFCI
1015	PASS THRU EVIDENCE LOCKERS, SPACESAVER OR APPROVED EQ. - CFCI, SEE SHEET A420 FOR TYPES AND SIZES
1101	HIGH DENSITY STORAGE SPACESAVER OR APPROVED EQ. - CFCI, SEE SHEETS A420 & A421 FOR TYPES & SIZES
1102	FORENSICS LOCKERS, SPACESAVER (OR APPROVED EQ. - CFCI, SEE SHEETS A420 & A421 FOR TYPES & SIZES
1113	TAMBOUR STYLE CABINET FOR AMMUNITION STORAGE, SPACESAVER OR APPROVED EQ. - CFCI
1122	LOCATION FOR FUTURE PASS THRU MAGNETOMETER, OWNER PROVIDED
1123	SECURE WIRE CAGE FENCE. SPACESAVER OR APPROVED EQ. - CFCI. SEE SHEETS A420 & SPECIFICATIONS FOR MORE INFO.
1125	BIKE STORAGE SHELVING. SPACESAVER OR APPROVED EQ. - CFCI, SEE SHEETS A420 & A421 FOR TYPES & SIZES
1126	ADJUSTABLE SHELVING. SPACESAVER OR APPROVED EQ. - CFCI, SEE SHEETS A420 & A421 FOR TYPES & SIZES
2804	CARD READER
2805	DOOR OPERATOR BUTTON



1 LEVEL 1 FLOOR PLAN
1/8" = 1'-0"

NORTH

STATE OF UTAH
THOMAS S. BRENNAN
07-261 07-A301
LICENSED ARCHITECT
8.22.17

WEST VALLEY CITY POLICE HEADQUARTERS

3560 S. MARKET
WEST VALLEY CITY, UT 84119

eda
#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT GP
PROJECT MANAGER SM

EDA PROJECT # 217016

#	Description	Date
	BID SET	09/05/2017

LEVEL 1 FLOOR PLAN

Date 09/05/2017

A101

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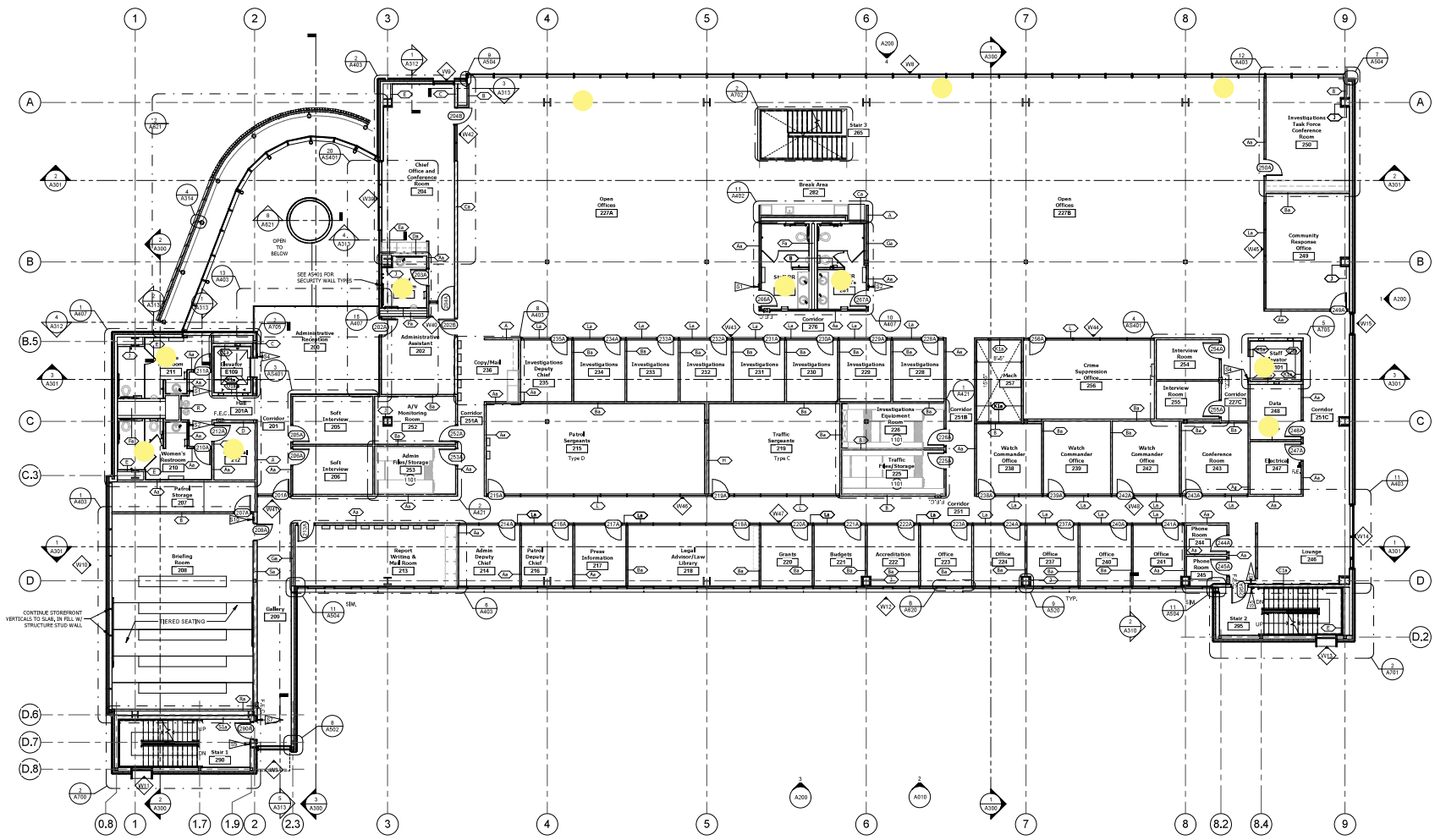
GENERAL PLAN NOTES

1. SEE SHEET A600 FOR WALL TYPES.
2. SEE SHEET A610 FOR DOOR SCHEDULES
3. SEE SHEET G004 FOR LOCATIONS OF FIRE RATED WALLS.
4. SEE SHEETS AS401, AS600 & AS601 FOR SECURITY WALL LOCATIONS AND DETAILS, SECURITY DOORS, FRAMES, GLAZING, EQUIPMENT, FURNISHINGS, AND DETAILS
5. ALL EXPOSED INTERIOR CMU CORNERS SHALL BE BULLNOSED
6. SEE SHEETS A620 & A621 FOR EXTERIOR WINDOW TYPES.
7. SEE SHEETS A630 & A631 FOR INTERIOR WINDOW TYPES.

KEYED NOTES

1101	HIGH DENSITY STORAGE SPACESAVER OR APPROVED EQ. - CFCI. SEE SHEETS A420 & A421 FOR TYPES & SIZES

STATE OF UTAH
THOMAS S. BRENNAN
07-261 Ln-A301
LICENSED ARCHITECT
8.22.17



1 LEVEL 2 FLOOR PLAN
1/8" = 1'-0"

WEST VALLEY CITY POLICE HEADQUARTERS

3560 S. MARKET
WEST VALLEY CITY, UT 84119

eda
#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801 531 7600
F: 801 363 3149

PROJECT ARCHITECT	GP
PROJECT MANAGER	SM
EDA PROJECT #	217016

#	Description	Date
	BID SET	09/05/2017

LEVEL 2 FLOOR PLAN

Date 09/05/2017

A102

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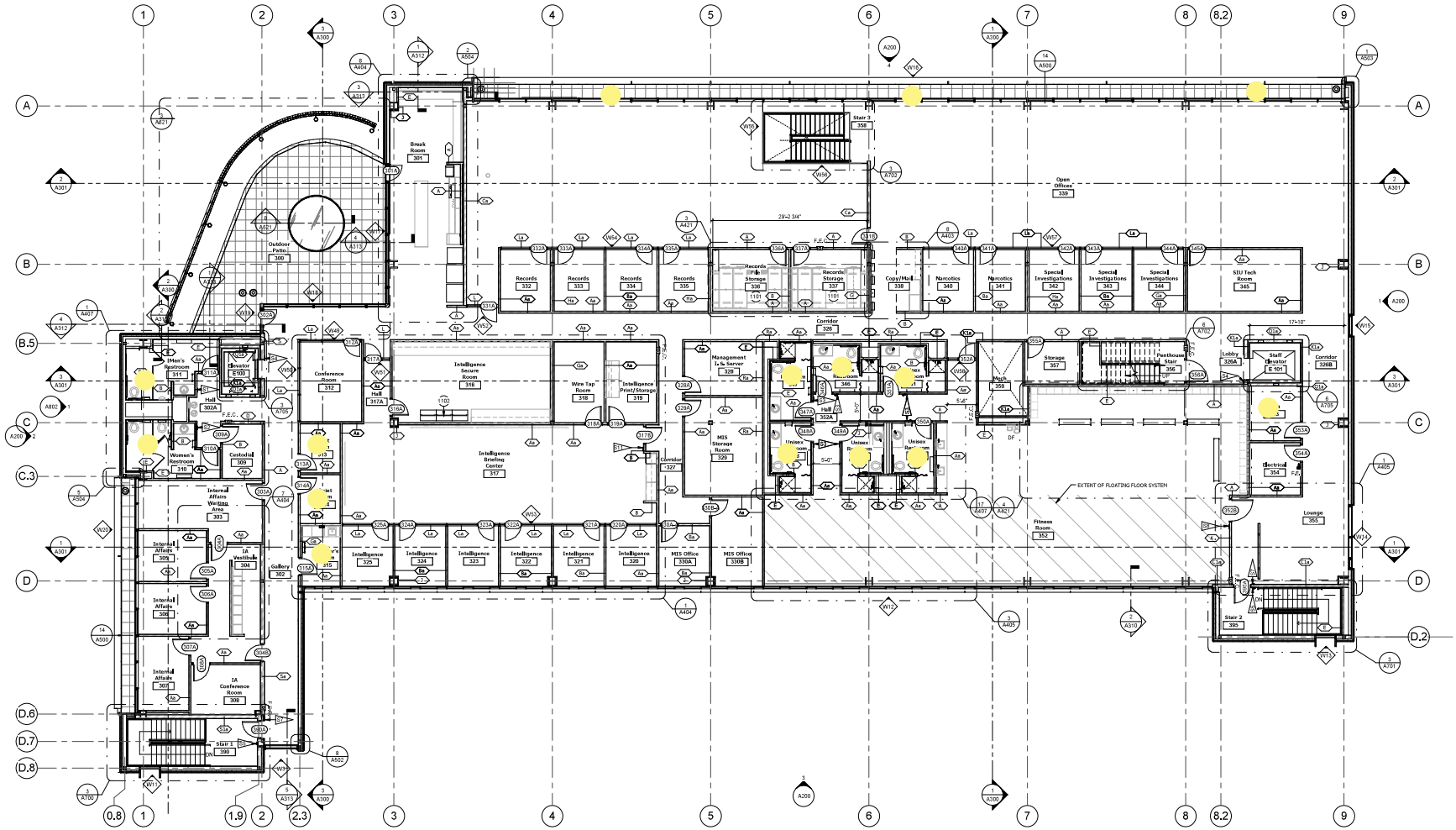
GENERAL PLAN NOTES

1. SEE SHEET A600 FOR WALL TYPES.
2. SEE SHEET A610 FOR DOOR SCHEDULES
3. SEE SHEET G004 FOR LOCATIONS OF FIRE RATED WALLS.
4. SEE SHEETS AS401, AS600 & AS601 FOR SECURITY WALL LOCATIONS AND DETAILS, SECURITY DOORS, FRAMES, GLAZING, EQUIPMENT, FURNISHINGS, AND DETAILS
5. ALL EXPOSED INTERIOR CMU CORNERS SHALL BE BULLNOSED
6. SEE SHEETS A620 & A621 FOR EXTERIOR WINDOW TYPES.
7. SEE SHEETS A630 & A631 FOR INTERIOR WINDOW TYPES.

KEYED NOTES

1101	HIGH DENSITY STORAGE SPACESAVER OR APPROVED EQ. - CFCI, SEE SHEETS A420 & A421 FOR TYPES & SIZES
1102	FORBRICS LOCKERS, SPACESAVER (OR APPROVED EQ. - CFCI, SEE SHEETS A420 & A421 FOR TYPES & SIZES

STATE OF UTAH
THOMAS S. BRENNAN
07-261 KT-A301
LICENSED ARCHITECT
8.22.17



1 LEVEL 3 FLOOR PLAN
1/8" = 1'-0"

WEST VALLEY CITY POLICE HEADQUARTERS

3560 S. MARKET
WEST VALLEY CITY, UT 84119

eda
#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
UTAH 84111
O: 801.531.7600
F: 801.363.3149

PROJECT ARCHITECT GP
PROJECT MANAGER SM

EDA PROJECT # 217016

#	Description	Date
	BID SET	09/05/2017

LEVEL 3 FLOOR PLAN

Date 09/05/2017

A103

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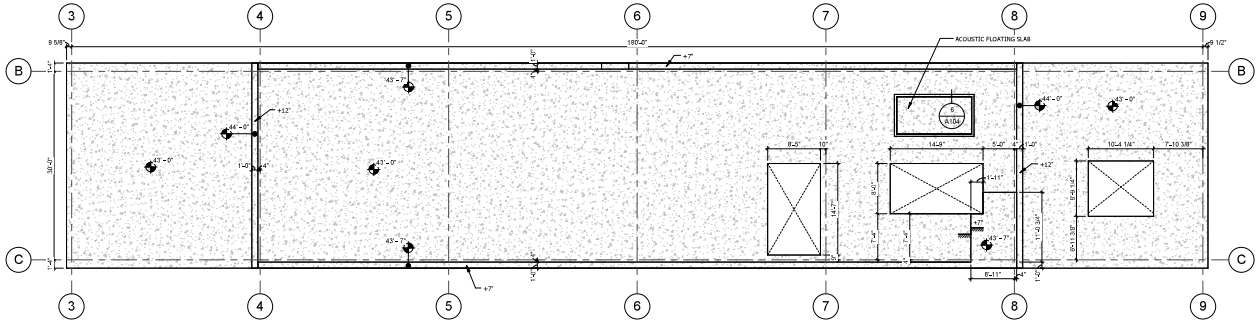
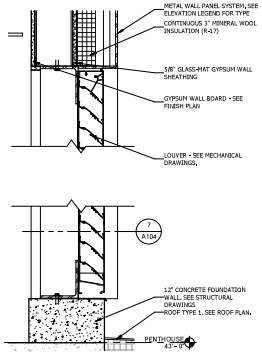


4 Penthouse Slab Plan
1/8" = 1'-0"

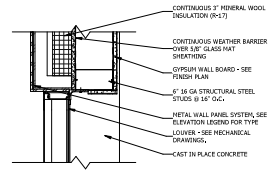
KEYED NOTES

301	CONCRETE SLAB OVER METAL DECK, SEE STRUCTURAL DRAWINGS
315	CAST IN PLACE CONCRETE
316	12" CONCRETE FOUNDATION WALL, SEE STRUCTURAL DRAWINGS
317	CONCRETE FLOATING FLOOR SYSTEM
318	CONCRETE CURB
502	METAL WALL PANEL SYSTEM, SEE ELEVATION LEGEND FOR TYPE
508	6" 16 GA STRUCTURAL STEEL STUDS @ 16" O.C.
511	METAL WALL PANEL PARAPET CAP, TO MATCH TYPE 2 WALL PANEL
614	5/8" GLASS-MAT GYPSUM WALL SHEATHING
702	CONTINUOUS WEATHER BARRIER
703	FULLY ADHERED PVC ROOF SYSTEM WITH R-30 ROOF INSULATION
709	CONTINUOUS 3" MINERAL WOOL INSULATION (R-17)
711	CONTINUOUS WEATHER BARRIER OVER 5/8" GLASS MAT SHEATHING
715	BATT INSULATION
724	ROOF TYPE 1, SEE ROOF PLAN.
726	ROOF TYPE 3, SEE ROOF PLAN.
802	SCHEDULED DOOR
813	LOUVER - SEE MECHANICAL DRAWINGS.
901	GYPSUM WALL BOARD - SEE FINISH PLAN
971	RF5 - TRAFFIC COATING
972	PA1 - PAINT
1020	PERIMETER ISOLATION MATERIAL
1124	SOUND ISOLATED FLOOR CHANNEL SYSTEM

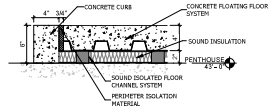
STATE OF UTAH
THOMAS S. BRENNAN
97-261 KNOWN
LICENSED ARCHITECT
8.22.17



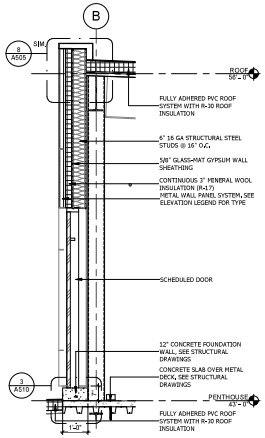
8 PENTHOUSE LOUVER HEAD/SILL DETAIL
1 1/2" = 1'-0"



7 LOUVER JAMB DETAIL
1 1/2" = 1'-0"



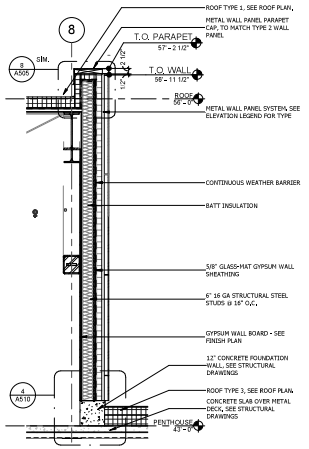
6 CHILLER ISOLATION SLAB DETAIL
1 1/2" = 1'-0"



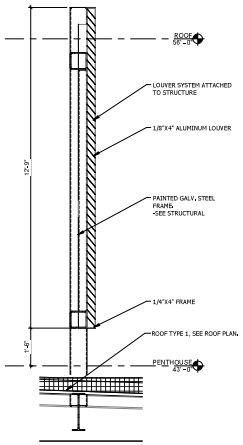
5 WEST WALL SECTION @ PENTHOUSE
1/2" = 1'-0"

WEST VALLEY CITY POLICE HEADQUARTERS

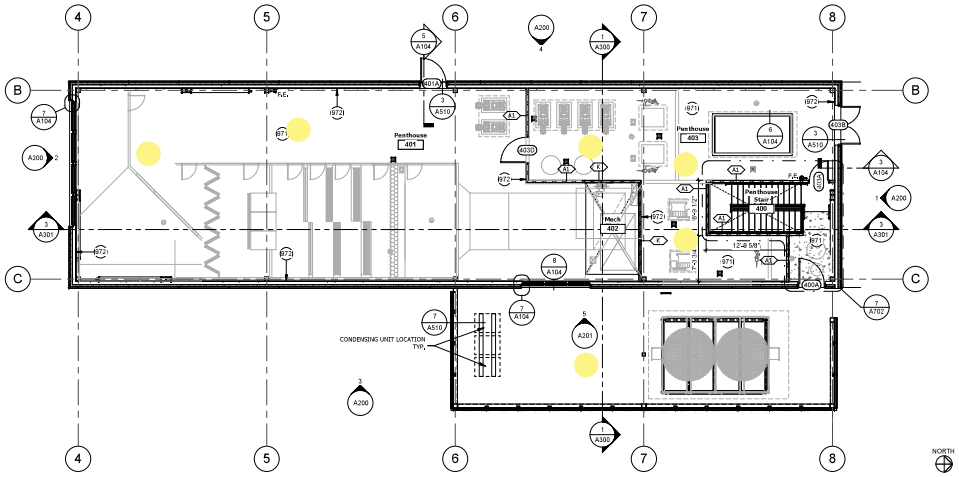
3560 S. MARKET
WEST VALLEY CITY, UT 84119



3 WALL SECTION @ PENTHOUSE
1/2" = 1'-0"



2 ROOFTOP FENESTRATION SECTION
1/2" = 1'-0"



1 Penthouse
1/8" = 1'-0"

eda
#9 EXCHANGE PLACE
SUITE 1100
SALT LAKE CITY
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PROJECT ARCHITECT GP
PROJECT MANAGER SM

EDA PROJECT # 217016

#	Description	Date
	BID SET	09/05/2017

PENTHOUSE PLAN & DETAILS

Date 09/05/2017

A104

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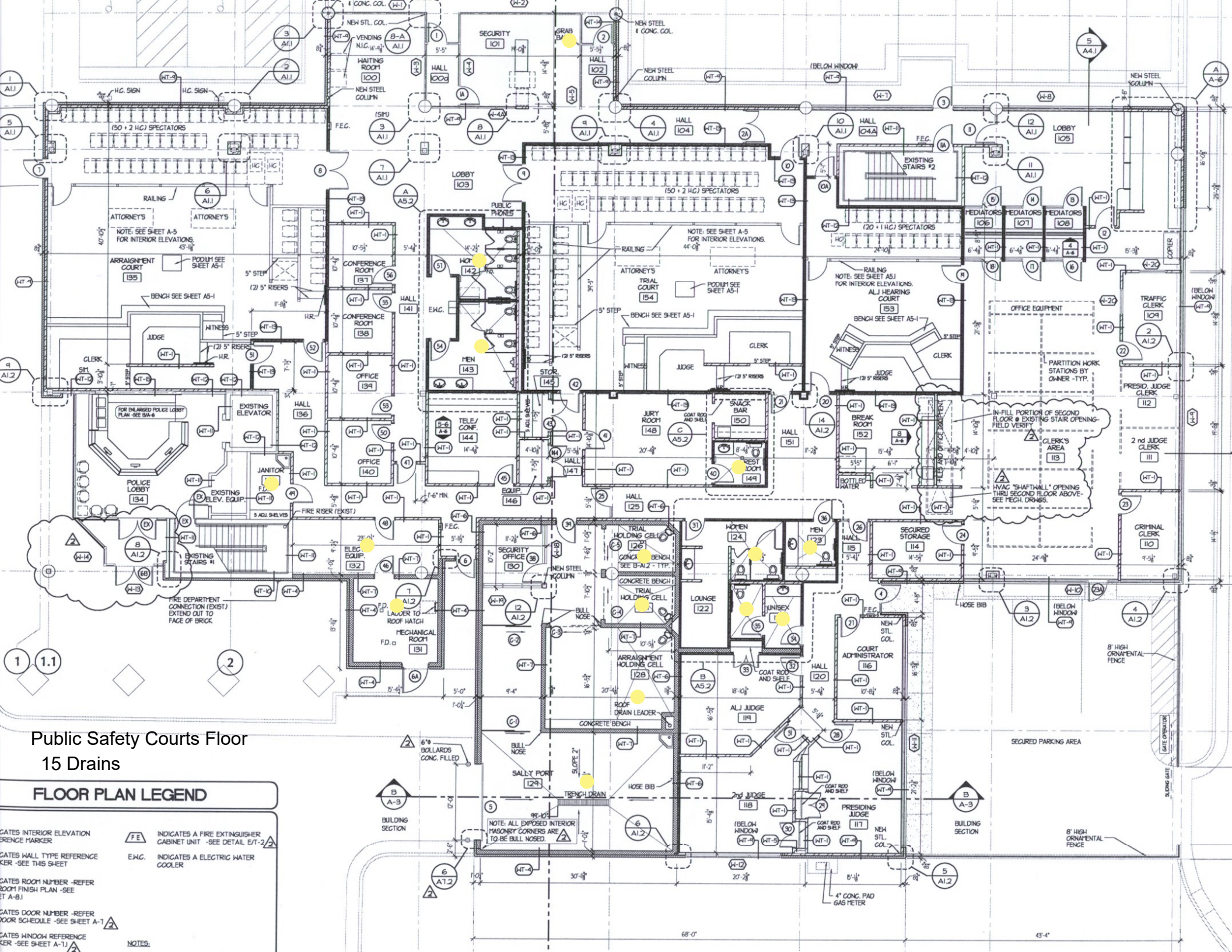


Public Safety Courts Floor
15 Drains

FLOOR PLAN LEGEND

GATES INTERIOR ELEVATION
ERENCE MARKER

GATES WALL TYPE REFERENCE
KER -SEE THIS SHEET

GATES ROOM NUMBER -REFER
ROOM FINISH PLAN -SEE
ET A-8.1

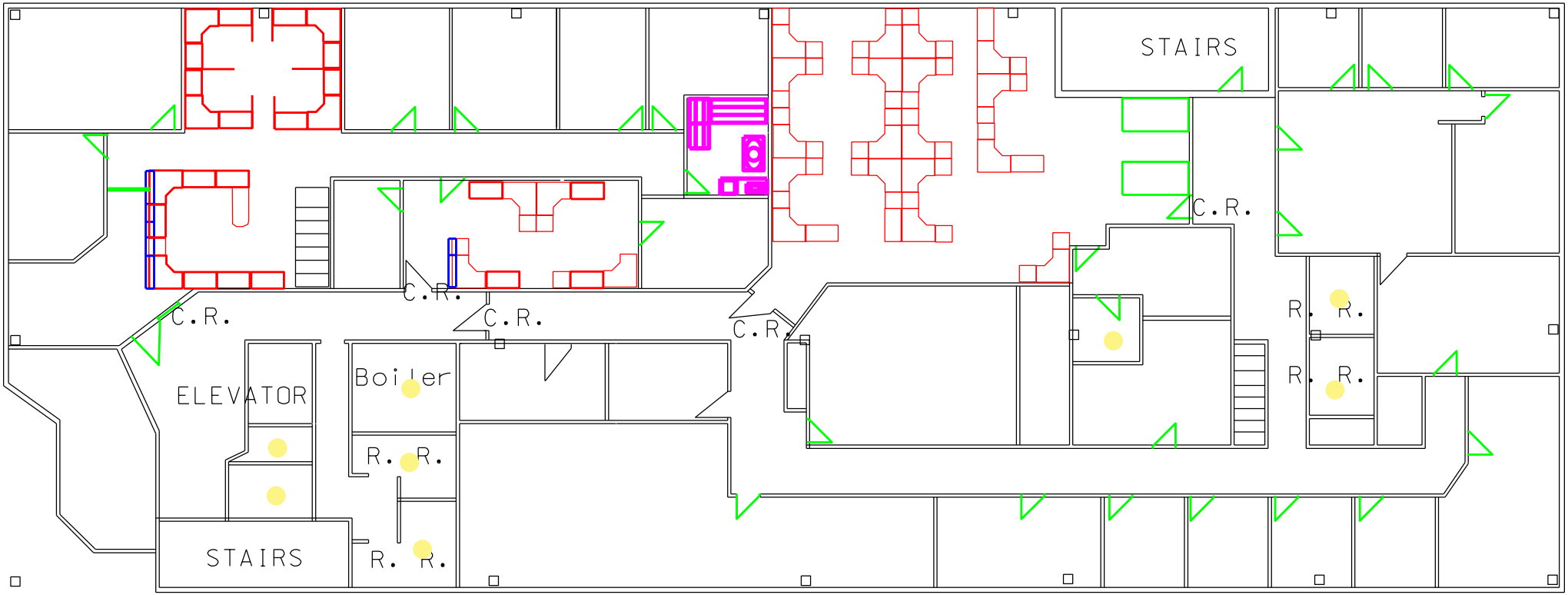
GATES DOOR NUMBER -REFER
DOOR SCHEDULE -SEE SHEET A-7

GATES WINDOW REFERENCE
KER -SEE SHEET A-7.1

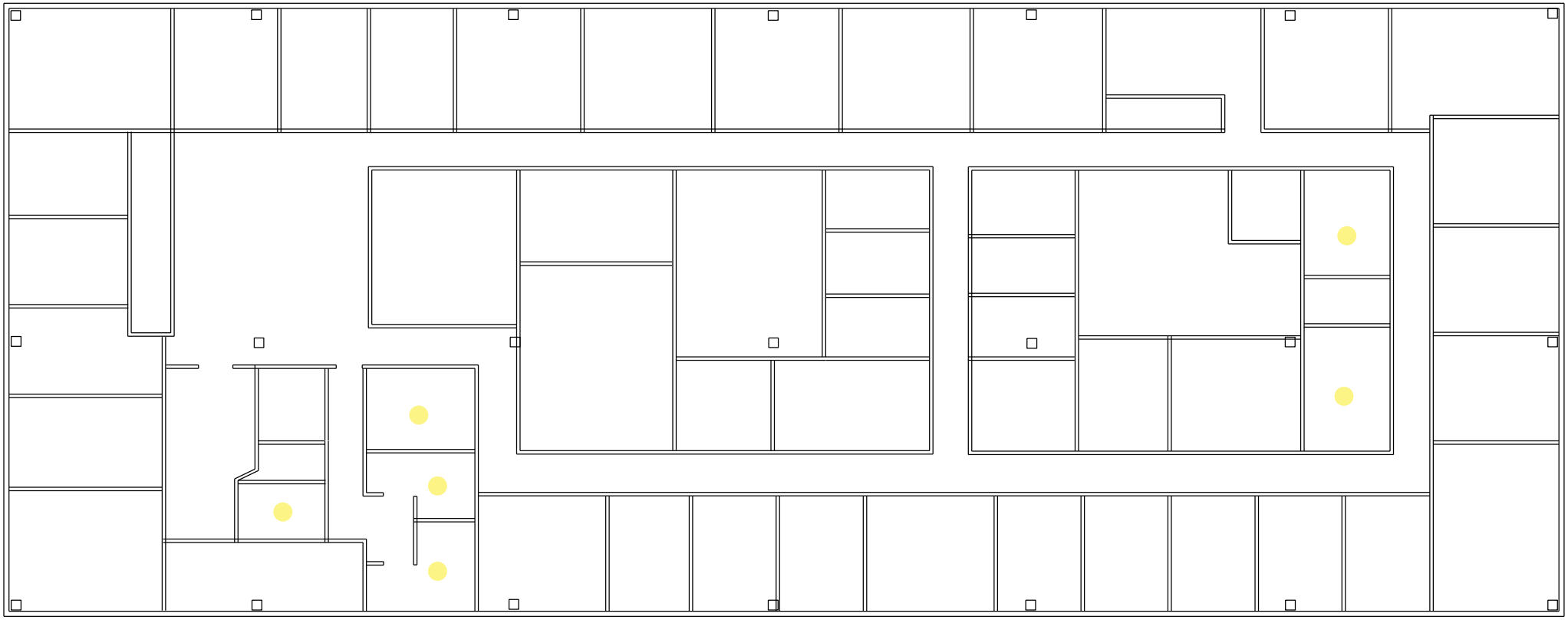
F.E. INDICATES A FIRE EXTINGUISHER CABINET UNIT -SEE DETAIL E/T-2

E.W.C. INDICATES A ELECTRIC WATER COOLER

NOTES:



Public Safety
SECOND FLOOR
8 Floor Drains



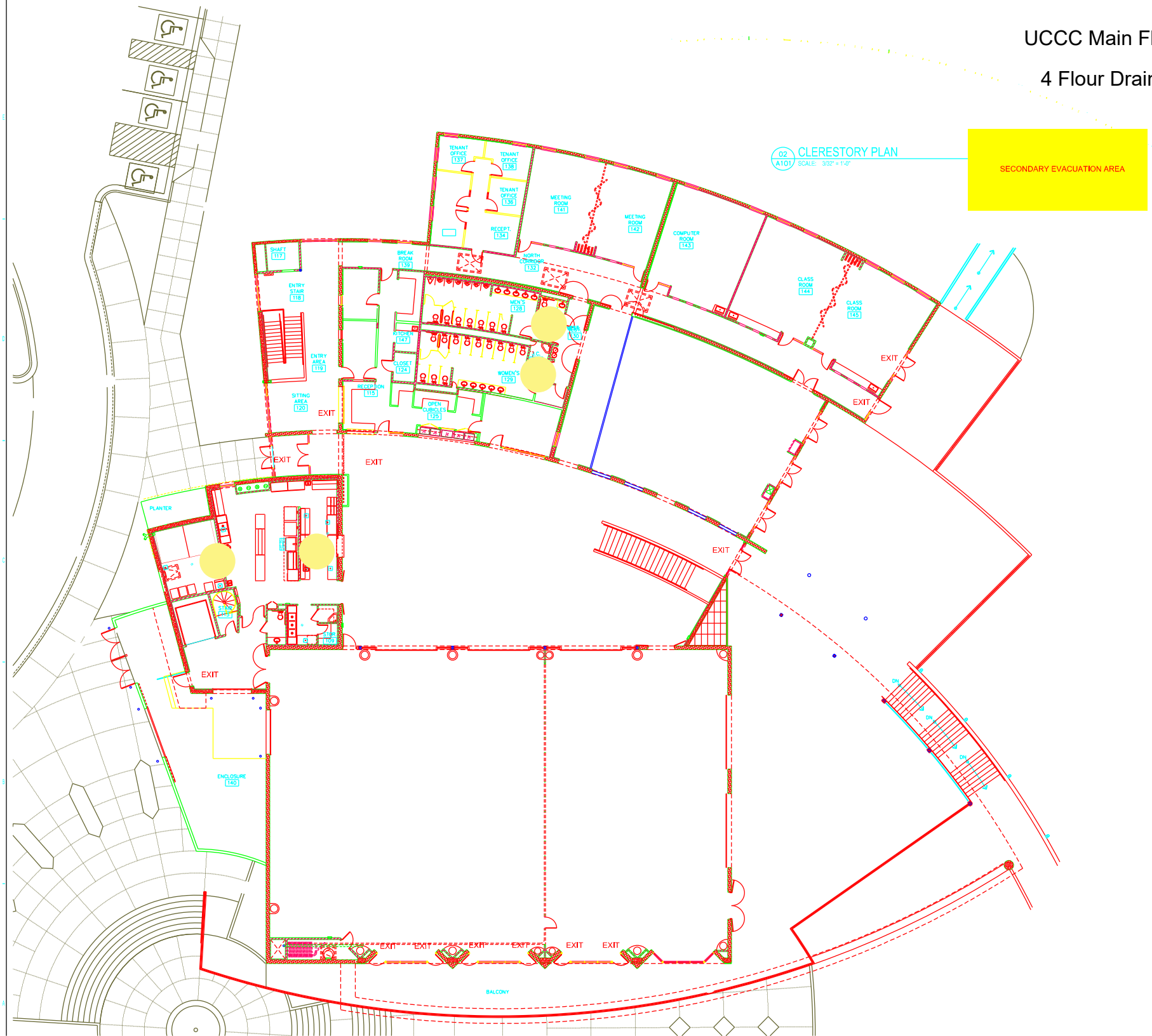
Public Safety

THIRD FLOOR

6 Floor Drains

UCCC Main Floor

4 Flour Drains



UCCC Basement
16 Floor Drains

Appendix G

Standard Operating Procedures (SOP)

Escalating Enforcement
Tracing the Source of an Illicit Discharge
Cease Illicit Discharges
Spill Response Plan
Spill Response Flowchart
SWPPP Review Procedures
Public Hotline On Call response
Construction Stormwater Inspection Procedures
Post Construction Inspections
Monthly Operations and Maintenance Site Inspection
Semi-Annual Operations and Maintenance Site Inspection
Annual Operations and Maintenance Site Inspection
Spill Response
Ditch Cleaning
Garbage Can Delivery and Cleaning
Phragmites Smashing
Clean Storm Drain Grates
Desilting Structure Cleaning
Storm Water Pump Inspections
Weed Control Spraying
Shops Storage and Cleaning Procedures
Storm Drain Basins
Storm Drain Inspections
Street Sweeping
Vactor Operations and Storm Drain Cleaning
Hauling Excess Snow Away

Fire Department
- Emergency Response
- Hazard Communication
- Hazard Communication Program Training
- Hazardous Materials Response
- Incident Management
- Anthrax Tactical Response Plan
- Emergency Response to Suspicious Envelopes, Packages, Containers
- Exposure Control Reporting of Infectious Disease or Chemical Containment
- Meth Lab Response
- Wastewater Discharge

ESCALATING ENFORCEMENT

STANDARD OPERATING PROCEDURES

permit Section 4.2.4.2.1

All construction activities may be subject to inspection without notice.

It is your responsibility to protect your construction site from pollutants entering the City's Stormwater System.

- Verbal warning issued during all preconstruction meetings.
- In the event a preconstruction meeting was not warranted (e.g. Illicit Discharge, Single residential lot construction, etc…), a written warning may be issued for the first violation.
- **Storm Water Enforcement –** Refer to the most current memorandum addressed to the West Valley City Attorney's Office that designates all personnel authorized in the Engineering Division to enforce storm water ordinance.
- **Administrative Citations –** May be written through the Administrative Code Enforcement ("ACE") Hearing Program in title 10 of the West Valley City Municipal Code. * The Engineering Division may issue citations as follows:
    - 1st citation: $100 per violation observed.
    - 2nd citation: $200 per violation observed.
    - 3rd citation: $400 per violation observed.
    - Provide appropriate information with citation
        - Issue citation, including citation number
        - Include corrective action(s) required
        - Give deadline date(s) for corrective actions to be completed
        - If not in compliance after deadline date has passed, issue a Notice of Violation
- A **Violation** is defined as a failure to implement or maintain any single BMP or construction activity which poses a pollution risk to the MS4. One violation may be considered multiple instances of the same offence (i.e. multiple catch basins without protection can be one offence), or it may be considered for each instance of an offence (i.e. each catch basin without protection can be one offence). It is at the discretion of the inspector to determine the seriousness of the violation and determine the appropriate number of violations observed. Issue the Notice of Violation per Title 10 and Title 18 of the City Code per procedure:
    - Issue NOV with reference to citation number
    - Issue a deadline of 10 days after date sent for compliance (give the nearest day of the week City Offices are open)

- Fine of $25.00 / day starts the following day after the 10 day deadline has expired.
- Track these dates within WVCPW database and take appropriate steps based on compliance or non-compliance. If non-compliance persists, WVCPW may incur the cost to implement the corrective action(s) and recoup, through appropriate legal channels, the cost for completing the work from the violator.

- In the event a violator refuses to sign the citation or is not present, ***the citation is delivered by certified mail to the responsible party's main address.***

- After a citation is delivered or mailed, receipt of payment is the responsibility of the City Attorney's Office. If payment is not received, The City has sole discretion to decide whether to file a civil or criminal case, or both, for a violation.

- **Stop Work Order –** May be issued at any time by authorized personnel for egregious acts which the inspector deems to pose a significant risk to health, safety and environmental quality.

- **Case escalated to State for further infractions as necessary.**

***Note: Citations shall be issued based on frequency and/or duration of infractions. The City reserves the right to take any and all enforcement actions permitted by law in the sole discretion of the City. Nothing in this document shall require the City to begin at a lower level of enforcement.**

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** **TRACING THE SOURCE OF AN ILLICIT DISCHARGE**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 06/09/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

4.2.3.4 Requires that any illicit discharge be traced to its source when possible so responsible parties can be held accountable and the illicit discharge can be stopped.

TARGETED POLLUTANTS OR HAZARDS:

Any non-storm water pollutant which enters into the storm drain system.

A. PURPOSE/DESCRIPTION:

1. Follow a methodical process to properly identify the contaminating source of an illicit discharge. Ideally, several people will be utilized for tracing the discharge in order to verify the source before the pollutant ceases to be observed.

B. WORK PROCEDURES:

1. Arrive and verify the location where the initial discharge was reported.
2. Visually inspect and observe reported discharge.
3. Respondents should never enter private property without permission and never put themselves in danger, including entering storm drain structures in any manner or form without proper protective equipment.
4. Utilizing the storm water system map, locate the next structure upstream of the discharge where observations can be made and open manhole lids to visually inspect discharges.
5. Observe at the upstream structure if there is non-storm water discharge at that location.
6. Steps 2 and 3 will be repeated until locating a structure where the discharge is not present.
7. If necessary, and as appropriate, the WVCPW will use the mobile video camera, equipment and field tests to verify pollutants and help trace the source of the discharge.
8. Where respondent feels it necessary, a 3rd party lab may be contacted for sampling and testing of samples.
9. When a structure observed does not contain evidence of an illicit discharge, one of two things will be determined.
   a) The source is no longer producing discharge and may not be further traced. The source may or may not be near this location. Observe surrounding areas or any further indication of the source of the discharge. If none is found, document findings for future reference.
   b) The discharge source should be located between the structure with no evidence of discharge and the next downstream structure. Observe surrounding areas to determine the source. If necessary, utilize video inspection equipment to locate the connection of the illicit discharge.
10. As appropriate, follow additional SOP's for next steps (Cease Illicit Discharge, Spill Response Plan and/or Characterize the Nature and/or Threat of the Illicit Discharge).
11. Document inspection in Cityworks database.

C. STAFF MEMBERS INVOLVED:

1. Stormwater Inspector(s)

D. EQUIPMENT (IF APPLICABLE):

1. Camera Truck
2. Personal Protective Equipment
3. Smart Phone or Laptop

E. EQUIPMENT CLEANUP PROCEDURES (IF APPLICABLE):

1. N/A

F. FORMS AND DOCUMENTATION (IF APPLICABLE):

1. Digital Storm Drain Incident Report in Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: CHARACTERIZE THE NATURE AND/OR THREAT OF THE ILLICIT DISCHARGE**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 6/9/2020

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

4.2.3.5. Implement SOPs or similar type of documents for characterizing the nature of, and the potential public or environmental threat posed by, any illicit discharges found by or reported to the Co-Permittee

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. To determine the nature of a discharge and if it poses a threat to the safety of the public or human and ecological life. This may be done by visual indicators (e.g. soap suds, discoloration, floating pollutants) and/or analysis (e.g. pH levels, chemicals present, hydrocarbon levels, etc.)

B. WORK PROCEDURES:

1. If informant of the illicit discharge knows what substance was discharged into the system, further identification may be unnecessary (e.g. paint was dumped into the system). Obtain MSDS sheet if available.
2. Characterize the nature of the discharge based on visual observation.
3. Samples of the discharge are collected, if necessary, and analysis may be completed if appropriate tools are readily available
4. If it is a hazardous substance, appropriate hazmat teams will be dispatched and can run necessary tests to determine the nature and extent of a threat the discharge may pose to public safety and life.
5. When necessary, labs will be utilized to determine complete composition of substances; however, lab results may take a long time to process. Potential cleanup measures may have already taken place and if lab results indicate any further safety concerns, even after cleanup measures were completed, public notices may be issued as necessary.
6. Complete documentation in Cityworks database with the decision process to characterize the discharge, including; steps indicating why a particular method was used, what containment measures were completed, analytical results

C. CREW MEMBERS INVOLVED:

1. Construction Inspector(s)
2. Storm Water Inspector(s)

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment - If needed for site inspections

E. EQUIPMENT CLEANUP PROCEDURES:

1. (N/A)

F. FORMS AND DOCUMENTATION:

1. Digital Inspection Form in Cityworks database

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: CEASING ILLICIT DISCHARGES**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 6/9/2020

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

4.2.3.6. Implement SOP for ceasing the illicit discharge, including notification of appropriate authorities; notification of the property owner; technical assistance for removing the source of the discharge or otherwise eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated.

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Implement SOP for ceasing illicit discharges.

B. WORK PROCEDURES:

1. Verify source of discharge
2. Contact the property owner and/or responsible party
3. Require immediate cessation of the illegal discharge from the source upon confirmation of responsible parties as provided by WVCMC §10 and §18.
4. In the event that the illicit discharge is a sanitary sewer overflow, the improvement district with jurisdiction at the location of the discharge will be contacted to cease the illicit discharge and provide cleanup of the discharge per the improvement district's procedures.
5. If WVC Public Works personnel are trained in removing the substance, proceed with spill/dumping response procedures. Otherwise, West Valley City Fire Department teams should be dispatched for spill containment and cleanup.
6. A Notice of Violation shall be issued to the responsible party as necessary.
7. Require corrective measures as allowed by WVCMC §10 and §18 when necessary.
8. In some cases, the property owner or business operator may be unaware of the hazards posed by the illicit discharge or that an illegal connection exists. In these cases, provide necessary education and training to these individuals to prevent re-occurrence of illicit discharge.
9. As necessary, provide follow-up inspections after corrective measures have been installed to ensure proper construction and use of BMP's.
10. In certain circumstances it may be necessary to escalate enforcement and legal actions in order to achieve compliance of this minimum control measure
11. Complete Documentation in Cityworks database.

    As necessary, third-parties may be called in for clean-up efforts by Property Owner or WVC and WVC reserves the right to recoup any associated cleanup costs and/or construction costs per WVCMC §18 in order to comply with permit requirements.

C. CREW MEMBERS INVOLVED:

1. Storm Water Inspector(s)

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment - If needed for site inspections

E. EQUIPMENT CLEANUP PROCEDURES:

1. (N/A)

F. FORMS AND DOCUMENTATION:

1. Digital Inspection Form in Cityworks database

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: SPILL RESPONSE PLAN**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 6/9/2020

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

4.2.3.9.1 Develop a written spill/dumping response SOPs or similar type of document and a flow chart for internal use, that shows the procedures for responding to public referrals of illicit discharges, the various responsible agencies and their contacts, and who would be involved in illicit discharge incidence response

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Implement SOP for Spill Response Plan

B. WORK PROCEDURES:

Some or all of the following actions may be implemented when a spill occurs.

1. Initial notification of discharge received.
2. Observe and investigate the reported discharge per the Tracing the Source of an Illicit Discharge procedure.
3. Define the size, location, and content of the spill; its direction and speed of movement; and its hazard or risk to the safety of the general public or likelihood of affecting sensitive habitats.
4. Contact appropriate authorities as needed from the internal flow sheet based on provided information and/or initial observation for containment and cleanup. The product, if known, may dictate the response. These may include:
    a. WVC Public Works storm water personnel
    b. WVC Police Department
    c. WVC Fire Department– including all unknown hazardous materials
    d. Salt Lake County Health Department
    e. State of Utah Division of Water Quality
    f. Environmental Protection Agency
    g. Local wastewater improvement districts (Granger-Hunter Improvement District, Kearns Improvement District, Taylorsville-Bennion Improvement District or Magna Water District)
5. Get trained personnel and equipment to the site quickly.
6. Ensure the safety of all response personnel and the public.
7. Stop the flow from the source, if possible, and prevent ignition, if flammable.
8. Contain the spill to a limited area.
9. Remove the spilled material using proper techniques for the particular substance.
10. Dispose properly of the spilled material after removal.
11. Issue citations as appropriate following the Escalating Enforcement SOP
12. Complete Documentation in Cityworks database
13. Follow up as needed where corrective actions are required.

C. CREW MEMBERS INVOLVED:

1. Storm Water Inspector(s)
2. Public Works Operations
3. Others as necessary

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment - If needed

E. EQUIPMENT CLEANUP PROCEDURES:

1. (N/A)

F. FORMS AND DOCUMENTATION:

1. Digital Inspection Form on Cityworks

The following table provides an easy reference guide to classify the type of spill. This table should be utilized to help identify the proper response procedure.

Table 1 Classification of Spills

Classification of Spills (all spills will be responded to 24/7)				
Criteria	**Level I**	**Level II**	**Level III**	**Level IV**
Small Spill	X		X	
Large Spill		X		X
Non-hazardous Material Identified (i.e. engine oil, antifreeze, hydraulic oil)	X	X		
Unknown Material			X	X
Hazardous Material Identified			X	X
WVC Emergency Operation Plan Activated?	No	Not Likely	Maybe	Maybe
Response Leader	WVCPW	WVCFD/Hazmat	WVCFD/Hazmat	WVCFD/Hazmat
Immediate Threat to Life and/or Property?	No	Maybe	Maybe	Likely
Does Spill Pose Liability to WVC?	No	Maybe	Maybe	Maybe
Has Injury Potential for Citizens or Responders?	Low	Maybe	Maybe	Maybe
Potential to Reach State Water Bodies	Low	High	Low	High
City Infrastructure Impaired or Damaged	Unlikely	Maybe	Likely	Likely
Traffic Control Measures Needed?	No	Maybe	Maybe	Likely
Support needed from Additional Agencies/Divisions	Unlikely	Maybe	Maybe	Maybe

Response Type

Different responses will be followed based on the type and amount of material involved in the spill. The table that follows lists the various types of spills with their corresponding procedures to respond to the spill.

Note: When an accident has occurred where Law Enforcement and a Wrecker has responded, the Wrecker driver is responsible for cleanup of these small spills. City contracted sanitation organizations are also required to clean up their spills.

Table 2 Spill Responses Based on Spill Classification

Spill Response Plan (Each spill will be attended to in the following manner, depnding upon spill classification)				
Action Item	**Level I**	**Level II**	**Level III**	**Level IV**
Lead Agency	WVCPW	WVCFD/Hazmat	WVCFD/Hazmat	WVCFD/Hazmat
WVCPD Dispatched?	No	Possible	Possible	Possible
SLV Health Dept. Dispatched	No	Yes	Yes	Yes
Additional Agencies/Divisions or 3rd Party Contractors Dispatched (as needed)	X	X	X	X
Evaluate Spill and Decide Mitigation Strategy	X	X	X	X
Place Traffic Control Measures (as needed)	WVCPD	WVCPD	WVCPD	WVCPD
Utilize Appropriate Protective	X	X	X	X
Spill Containment	WVCPW	WVCFD/Hazmat	WVCFD/Hazmat	WVCFD/Hazmat
Identify Unknown Substance			X	X
Spill Cleanup (if Responsible Party Known) - WVCPW Monitors Cleanup to Ensure Compliance	Resp. Party (if Qualified)	Resp. Party (if Qualified)	WVCFD/Hazmat	WVCFD/Hazmat
Spill Cleanup Coordination	WVCPW	WVCFD/Hazmat	WVCFD/Hazmat	WVCFD/Hazmat
Sweepers Dispatched	As Needed	As Needed	As Needed	As Needed
Material Disposal (very small spill)	Dumpster		Hazmat	
Material Disposal	WVCPW Containment Area	Hazmat	Hazmat	Hazmat
Who Addresses Media Questions			WVCFD	WVCFD
Document Incident Report	X	X	X	X
Report All Reportable Quantities as Required		X	X	X
Notice of Violation Issued (if responsible party is known)	X	X	X	X
Fines Imposed (where applicable)	X	X	X	X
Follow Up Inspection (when necessary ie. Removal of illicit connections, damage to infrastucture)	X	X	X	X
Costs Recouperated from Responsible Party	X	X	X	X

Sanitary Sewer Overflows (SSO)

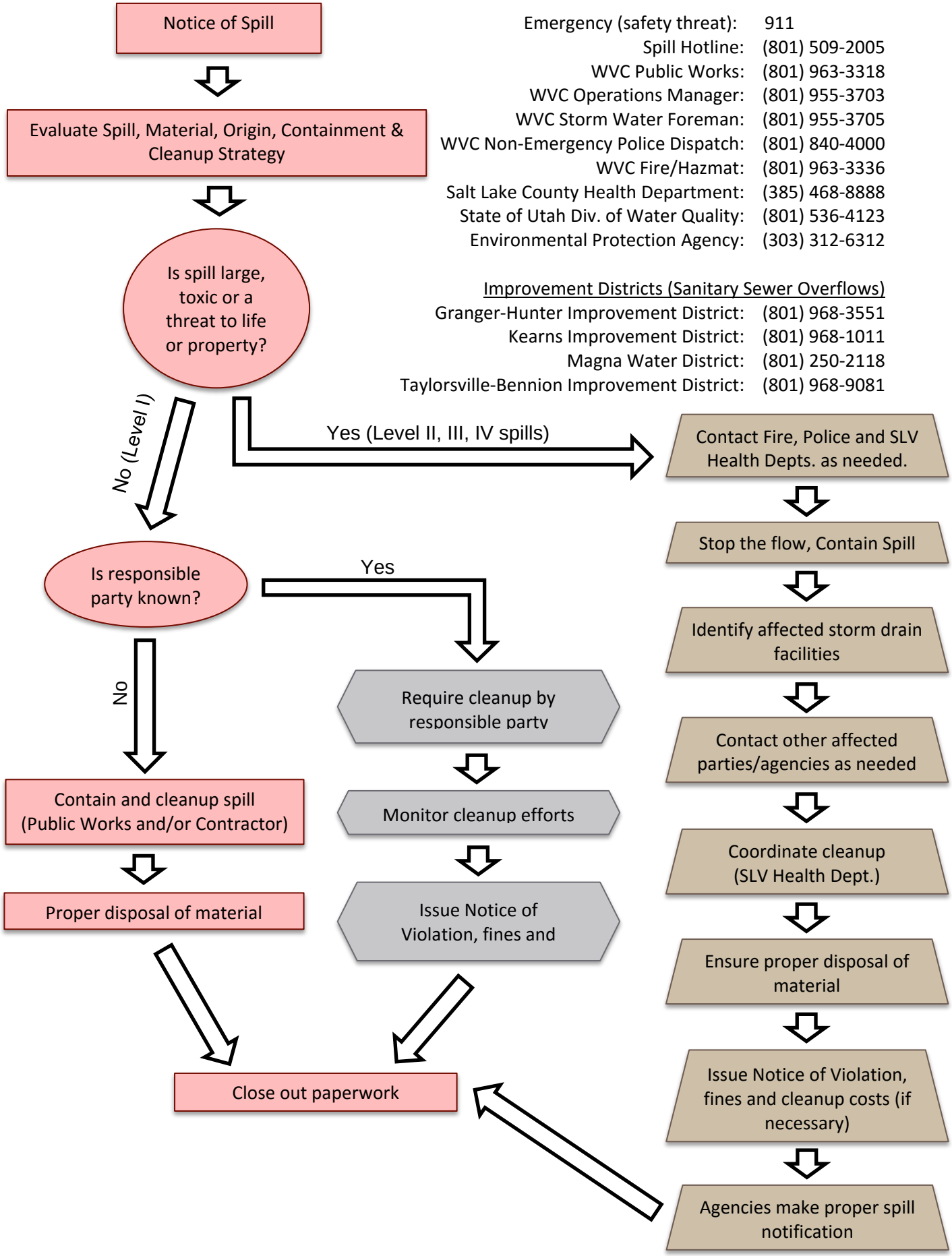
When SSO's occur, the appropriate wastewater improvement district (listed on flow chart) will be contacted for response and cleanup. If requested or required by the responding district, WVCPW will assist under their direction in providing response support. Additionally, investigative reports will be completed and submitted to the Division of Water Quality with our annual report.

West Valley City Public Works
Spill Response Plan Flow Chart

Emergency (safety threat):	911
Spill Hotline:	(801) 509-2005
WVC Public Works:	(801) 963-3318
WVC Operations Manager:	(801) 955-3703
WVC Storm Water Foreman:	(801) 955-3705
WVC Non-Emergency Police Dispatch:	(801) 840-4000
WVC Fire/Hazmat:	(801) 963-3336
Salt Lake County Health Department:	(385) 468-8888
State of Utah Div. of Water Quality:	(801) 536-4123
Environmental Protection Agency:	(303) 312-6312

Improvement Districts (Sanitary Sewer Overflows)

Granger-Hunter Improvement District:	(801) 968-3551
Kearns Improvement District:	(801) 968-1011
Magna Water District:	(801) 250-2118
Taylorsville-Bennion Improvement District:	(801) 968-9081



	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: STORM WATER POLLUTION PREVENTION PLAN REVIEW AND INSPECTION**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 6/2/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

4.2.4.3 SWPPP review and record keeping for all construction sites that disturb greater than or equal to 1 acre, including projects less than one acre that are part of a larger common plan of development or sale, to ensure plans are complete and in compliance with State and Local regulations.

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Develop a standard procedure for reviewing and keeping record of active Storm Water Pollution Prevention Plans

B. WORK PROCEDURES:

1. SWPPP is submitted online by the developer through the permit portal https://pllportal.wvc-ut.gov/portal
2. The SWPPP is reviewed by the West Valley Engineering Plan reviewer - NOI verification and verification that State DEQ template was followed in the SWPPP development.
3. Identify potential water quality impacts; especially sites that discharge directly into or immediately upstream of water that the state recognizes as impaired.
4. WVC Storm Water Management Permit – Construction Period is issued after SWPPP approval
5. A pre-construction SWPPP review meeting is held which includes a review of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development.
6. Maintain a copy of SWCP and SWPPP in WVC database for a minimum of 5 years or until the project is complete, whichever is longer.

C. CREW MEMBERS INVOLVED:

1. SWPPP Reviewer
2. Construction Inspector(s)
3. Storm Water Inspector(s)

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment - If needed for site inspections

E. EQUIPMENT CLEANUP PROCEDURES:

1. (N/A)

F. FORMS AND DOCUMENTATION:

1. WVC Engineering Standards

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: PUBLIC HOTLINE - ON-CALL RESPONSE**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 7/20/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

4.2.3.9 Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. A written record must be kept of all calls received, all follow-up actions taken, and any feedback received from public education efforts.

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Implement SOP for Public Hotline Response (801) 509-2005

B. WORK PROCEDURES:

1. Call out phone is rotated among the RSI personnel
2. RSI personnel monitor the calls 24 hours a day
3. Call is received on 24-hr hotline
4. Information regarding the incident is gathered from the phone call.
5. Based on Information the following SOP procedures are used/followed:
   A. Characterize the Nature or Threat of the Illicit Discharge
   B. Tracing the Source of Illicit Discharge
   C. Cease Illicit Discharge
   D. Spill Response Plan
6. Per the Spill Response Plan SOP appropriate authorities are contacted as needed
7. Complete Documentation in Cityworks database
8. Follow up as needed where corrective actions are required.

C. CREW MEMBERS INVOLVED:

1. Storm Water Inspector(s)
2. Public Works Operations
3. Others as necessary

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment - If needed

E. EQUIPMENT CLEANUP PROCEDURES:

1. Per Spill Response SOP

F. FORMS AND DOCUMENTATION:

1. Digital Inspection Form on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: CONSTRUCTION SITE INSPECTION**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 7/20/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY: Construction site inspection procedures and enforcement of construction storm water pollution control measures.

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Define procedure for Construction Site Inspections

B. WORK PROCEDURES:

1. RSI (Registered Storm Water Inspector) to obtain copies of West Valley City Storm Water Permit and the approved SWPPP (Storm Water Pollution Prevention Plan) from West Valley City Engineering Division.
2. RSI to review approved permit and SWPPP prior to meeting with designated ECS (Environmental Control Supervisor).
3. Discuss/review approved SWPPP during preconstruction meeting with Project ECS.
4. Visually inspect the permitted site SWPPP and verify all required BMPs (Best Management Practices) are properly placed per approved Plan.
5. Observe roadways for any mud and dirt tracking onto roadways. If tracking is observed, require cleanup and issue appropriate enforcement measures.
6. Verify findings of the site inspection by completing the approved state UPDES Storm Water Inspection Evaluation Forms for SWPPP compliance.
7. Inform on-site ECS of any possible SWPPP deficiencies and possible violations.
8. If warranted, issue Stop Work Order and or Administrative Citation per City Ordinance.
9. Follow-up as needed (i.e. as directed by RSI on written inspection/citation).
10. Complete documentation in Cityworks database

C. CREW MEMBERS INVOLVED:

1. Storm Water Inspector(s)

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment - If needed for site inspections

E. EQUIPMENT CLEANUP PROCEDURES:

1. (N/A)

F. FORMS AND DOCUMENTATION:

1. Documentation in Cityworks database

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: POST CONSTRUCTION INSPECTIONS (LONG-TERM)**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 7/20/2020
APPROVED BY: _____ Department Director or Division Head			
PERMIT REQUIREMENT SUMMARY: Implement and enforce a program to address post-construction storm water runoff to the ms4 from private and public new development and redevelopment construction sites meeting the thresholds below. The water quality considerations of this minimum control measure do not replace or substitute for water quantity or flood management requirements implemented on the local level for new development or redevelopment sites.		**TARGETED POLLUTANTS OR HAZARDS:**	

A. PURPOSE/DESCRIPTION:

The purpose of conducting Post Construction Inspections is to work with commercial and industrial businesses to educate, inform, require, and when necessary enforce the implementation of Storm Water Managements Plans as required in the West Valley City Storm Water Permit. The inspections are a tool to require industry to implement Best Management Practices that eliminate illegal dumping and, eliminate or mitigate the impacts of illicit discharges from spills or leaks. The goal is to improve water quality by preventing pollutants from getting into the municipal separate storm sewer system and Waters of the State.

B. WORK PROCEDURES:

1. Inspector reviews file of industry to be inspected. This will include reviewing previous inspections, contact information, enforcements, storm drain maps, and any other information to improve the inspection.
2. After the inspector has reviewed the file he/she has the following inspection options: A) If the history of the industry indicates no previous problems and a minimal potential of contamination to the storm drain the inspector may inspect the property without making contact with the company representative. If inspector finds no issues the inspection is complete. If inspector finds storm water issues that requires corrections an inspection is done with the proper company representative. B) The inspector contacts the proper company representative and makes an appointment for an inspection.
3. Inspector discusses with the company representative the goal of the storm water program and the benefits of following their Management Plan to eliminate pollutants from entering the storm water system. This includes the benefit of better water quality, and the encouragement to the industries of keeping pollutants from discharging to the storm drain system that may lead to expensive clean-up and potential fines.
4. Inspector will ask if the company representative has any questions or concerns regarding the inspection or the Storm Water Management requirements
5. Inspector will ask for a copy of applicable Storm Water Permits. The company should have a West Valley City Storm Water Management Permit on site. A State of Utah Storm Water Permit for Industrial Activities may also be presented if the company is required to have a State permit.
6. Inspector and company representative inspect the facility. All storm drain conveyance, boxes, snout locations, retention or detention basins, and storm water related improvements are inspected.
7. Inspector will review all documentation of the company storm water inspections, storm drain box cleaning, if any spills occurred, and clean-up measures taken, changes the SWMP, employee training, and any additional pertinent storm water documentation.
8. Inspector and company representative inspect the facility. All storm drain conveyance, boxes, snout locations, retention or detention basins, and storm water related improvements are inspected.
9. Inspector will look at general housekeeping practices to include landscaped areas, paved areas, dumpster locations, containment areas, fueling islands, bone yards, docking areas, etc.
10. Inspector has company representative show him spill kit(s).
11. If the company has raw materials and finished product stored inside that are loaded and unloaded at the facility on a regular basis inspector may tour the inside building(s) of the facility.
12. If during the inspection a deficiency is observed the inspector will require corrections be made. In some instances

where serious violations are found an immediate cease of the discharge order may be initiated and other government agencies may be contacted for additional enforcement and cleanup.

13. Inspector may take photos as needed.
14. Conclude inspection and let the company representative of findings. Best Management Practices that appear to be working should be mentioned as a positive finding. Let the representative know of any deficiencies that will require immediate attention, or deficiencies that need to be corrected within 30-60 days as applicable.
15. Complete industrial inspection report in Cityworks database.
16. Write a letter to the company representative with inspection findings. This may include implementation of Best Management Practices that appear to working, and any requirements to make corrections to deficient areas found during the inspection. The letter requires representative to call for a re-inspection when corrections are made.
17. If corrections were required re-inspect the facility and check off correction if it is satisfactory. If correction is not satisfactory, require facility to fix the problem and re-inspect until correction is made. In some cases, enforcement and penalties may be needed.

C. CREW MEMBERS INVOLVED:

1. Storm Water Inspector(s)

D. FORMS AND DOCUMENTATION:

1. Documentation in Cityworks Database

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** **MONTHLY OPERATIONS AND MAINTENANCE SITE INSPECTION**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Provide comprehensive visual inspection for high-priority city owned facilities. Record monthly the observations made, with a full UPDES report done annually.

B. WORK PROCEDURES:

1. Walk through the entire outside maintenance areas and look for any evidence of the following:
   a. Any oil/contaminants present on the ground from the equipment.
   b. Trash/debris around site that should be in swept up
   c. Drainage swell free of debris
   d. Floatables/silt in the catch basins
   e. Sweepings pile needing to be pushed up in sweepings containment bin
   f. Salt in need of being pushed up in salt containment bins
   g. Floor dry bins needing absorbent by the fuel pumps
   h. Brine containment has water present; if present take Ph test and observe if any other contaminates are present before making a log event on Cityworks and draining bin

C. CREW MEMBERS INVOLVED:

1. 1 Crew Member

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a. Safety shoes, safety glasses, hard hat (if necessary)

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All records will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** **SEMI-ANNUAL OPERATIONS AND MAINTENANCE SITE INSPECTION**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Provide comprehensive visual inspection for high-priority city owned facilities.

B. WORK PROCEDURES:

1. Walk through the entire outside maintenance areas and look for any evidence of the following:
   a. Any oil/contaminants present on the ground from the equipment
   b. Trash/debris around site that should be in swept up
   c. Drainage swell free of debris
   d. Floatables/silt in the catch basins
   e. Sweepings pile needing to be pushed up in sweepings containment bin
   f. Salt in need of being pushed up in salt containment bins
   g. Floor dry bins needing absorbent by the fuel pumps
   h. Brine containment has water present; if present take Ph test and observe if any other contaminates are present before making a log event on Cityworks and draining bin
   i. Make sure all garbage container lids are closed
   j. Inspect and lubricate weir at outfall

C. CREW MEMBERS INVOLVED:

1. 1 Crew Member

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety shoes
   b) Hard hat (if necessary)

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All records will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** **ANNUAL OPERAIONS and MAINTENANCE SITE INSPECTION**	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Provide comprehensive visual inspection for high-priority city owned facilities.

B. WORK PROCEDURES:

1. Walk through the entire outside maintenance areas and look for any evidence of the following:
   a. Any oil/contaminants present on the ground from the equipment.

   b. Trash/debris around site that should be in swept up

   c. Drainage swell free of debris

   d. Floatables/silt in the catch basins

   e. Sweepings pile needing to be pushed up in sweepings containment bin

   f. Salt in need of being pushed up in salt containment bins

   g. Floor dry bins needing absorbent by the fuel pumps

   h. Brine containment has water present; if present take Ph test and observe if any other contaminates are present before making a log event on Cityworks and draining bin

   i. Make sure all garbage container lids are closed.

   j. Visually observe the quality of the storm water discharge from site during the first half hour of a measurable storm. Will document color, floatables, smells, contaminant sheen (if present)

C. **CREW MEMBERS INVOLVED:**

1. 1 Crew Member

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety shoes
   b) Hard hat (if necessary)
   c) Rubber gloves

E. **EQUIPMENT CLEANUP PROCEDURES:**

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All records will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Spill Response/Containment	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 3/25/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. To contain and clean up any fluid spills reported to Operations Division.

B. WORK PROCEDURES:

1. First person to respond will notify Storm Water Supervisor.
2. First responder will do what they can to contain spill.
3. Storm Water Supervisor will contact Engineering on call and/or Storm Water Inspector.
4. Storm Water Supervisor will determine best course of action to contain and clean up spill. If unknown, Storm Water Supervisor or Inspector will contact Salt Lake County Health Department and/or Fire Department.
5. If determined floor dry is sufficient, absorbent will be applied and swept up to be thrown away.
6. If Health Department and/or Fire Department is called, they will determine how to clean up spill and Operations will follow their instructions.
7. Document source, all actions to contain and clean up spill, all equipment used, personnel involved on Cityworks.
8. Engineering will be responsible for issuing any illicit discharge warnings and/or citations if warranted.

C. CREW MEMBERS INVOLVED:

1. 1 or more

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Gloves
   b) Steel Toe shoes

2. Floor dry absorbent (if applicable)
3. Oil filter booms (if applicable)
4. Absorbent pads (if applicable)

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Spills will be documented on Cityworks and/or Spill Tracker.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** DITCH CLEANING	**SOP NUMBER OR ACTIVITY CODE:** 264	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Clean the ditches of debris that would cause the ditch to flood. The ditches are to be inspected annually as per state requirements. This cleaning is to be performed as necessary.

B. WORK PROCEDURES:

1. Use the backhoe to remove obstructions from the ditch. Place the debris in back of a vehicle and dispose of it at the landfill.

C. CREW MEMBERS INVOLVED:

1. 2 or more crew members

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Hard hat, gloves, safety boots, safety gloves
2. Backhoe, dump truck, pick up truck, shovel

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. All work orders for this activity will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY: GARBAGE CAN DELIVERY/CLEANING**	**SOP NUMBER OR ACTIVITY CODE:** 400	**ISSUE DATE:** 12/02/2013

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

THERE COULD BE HAZARDOUS MATERIALS IN THE CONTAINER. FOR THIS REASON, THEY ARE DUMPED PRIOR TO CLEANING AND CLEANED IN THE DESIGNATED CLEANING AREA WITH ALL PPE'S IN PLACE.

A. PURPOSE/DESCRIPTION:

1. Completes work orders related to garbage can deliveries, repairs, inspections and pick ups for West Valley City residents. Occasionally assists with in-office work, including answering phones, etc. Take inventory of all containers.

B. WORK PROCEDURES:

1. Unload and stack newly delivered cans. Build cans by unstacking each can, tipping it over, and applying a lid, two wheels, and any needed hardware. Get work orders for the day from the office. After delivering cans, replacing broken or missing cans, and picking up extra cans, return to the yard. Clean reusable containers in cleanout area. Place all broken containers in container for Sanitation Contractor to haul away.

C. CREW MEMBERS INVOLVED:

1. One man

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety vest, reflective coat, safety glasses, rubber gloves, safety shoes
2. Flatbed Truck with lift.
3. MATERIALS – garbage cans, green and blue surplus lids, wheels, end caps, cotter pins, washers
4. PRODUCTIVITY – 20-40 cans/moved per day

E. EQUIPMENT CLEANUP PROCEDURES:

1. All full garbage containers (broken or in good condition) are removed from the truck are lined up to be emptied by Sanitation Contractor. Empty broken cans are to be placed in container that is emptied by Sanitation Contractor. All good cans are washed with pressure washer before redelivering or being put into inventory ready for distribution. Washing of cans takes place in wash out bays – where all water is collected and routed to sewer lines.

F. FORMS AND DOCUMENTATION:

1.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Argo Phragmites Smashing	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 11/1/2017

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

Drive through mapped area smashing down Phragmites until laying flat.

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. To smash down Phragmites to allow for weed control

B. WORK PROCEDURES:

1. Unload argo from trailer.
2. Proceed to drive through and on top of Phragmites causing weeds to lay flat.
3. Drive through entire mapped out area until all weeds are laying flat.

C. CREW MEMBERS INVOLVED:

1. 2 crew members

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Gloves
   b) Eye protection
2. Argo

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Work Order for this activity will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Clean Storm drain grates	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 01/09/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Remove debris from storm drain grates to allow water to flow freely into Storm drain boxes

B. WORK PROCEDURES:

1. With the use of pitch fork or shovel remove any and all debris on storm drain box grate.
2. Place debris in back of truck.
3. Once truck is full dump all debris into the sweepings bin to be hauled to the landfill at a later date.

C. CREW MEMBERS INVOLVED:

1. 2 Operators

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Steel toe boots
   b) Safety vest
   c) gloves
2. Pickup truck

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Silt basin structure grate cleanings are logged on the Silt Basin Cleaning Log, Work Order for this activity will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Cleaning of desilting structures	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 01/09/2020

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Remove all mud from desilting structures to eliminate soils from migrating downstream.

B. WORK PROCEDURES:

1. Use loader to drive down ramp of desilting structure and scoop out all mud from structure.
2. Load mud into dump truck and take mud to landfill.

C. CREW MEMBERS INVOLVED:

1. 1 Loader Operator
2. 1 Dump truck driver

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) none
2. Loader
3. Dump truck

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Log of desilting basin cleanout is documented on the Silt Basin Cleaning Log
2. Weight ticket for disposal of mud is kept with Sweepings Hauled receipts
3. Work Order for this activity will be kept on Cityworks

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Storm Water Pump Inspections	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 01/09/2020

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Check condition and function of all Storm Water pump stations.

B. WORK PROCEDURES:

1. Check exterior condition of pump station, document any repairs needed if necessary.
2. Unlock control panel and visually inspect all controls.
3. Unlock and open top of water vault.
4. Check functionality of all control floats.
5. Turn all power controls from AUTO to HAND and check water flow at outlet/outfall.
6. Return all power controls to AUTO positions.
7. Add pump lubrication oil to reservoirs (if necessary)
8. Shut and lock control panel.
9. Shut and lock water vault.

C. CREW MEMBERS INVOLVED:

1. 2 Operators

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Steel toe boots
   b) gloves
2.

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Monthly pump logs are kept on Cityworks or with the Storm Water Maintenance Supervisor.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Weed Control Spraying	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** 4/1/2017

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

Spray weeds to prevent weed growth

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Use sprayable chemicals to control weed growth

B. WORK PROCEDURES:

1. Place tank in back on pickup.
2. Strap tank down and plug in electrical connector.
3. Read chemical label and mix to manufacturer's instructions.
4. Drive to area that is to be sprayed.
5. Check wind direction/speed and make sure wind in not blowing more than 5 mph and to spray where the chemical is not being blown back onto self.
6. Spray all chemicals according to Utah Herbicide/Pesticide laws and to chemical manufacturer's instructions.

C. CREW MEMBERS INVOLVED:

1. 2 crew members

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Eye protections
   b) Rubber gloves

2. Pickup with tank mounted in bed.

E. EQUIPMENT CLEANUP PROCEDURES:

1. Use all chemicals out in the field.
2. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Pesticide application records will be kept with the Storm Water Maintenance Supervisor.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** SHOPS STORAGE AND CLEANING PROCEDURES	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. In order to maintain a clean and compliant facility, all West Valley City employees will adhere to the following procedures:

B. WORK PROCEDURES:

1. All city vehicles are to be parked in the city shops lot. Vehicles which are leaking fluids will be placed inside a building; otherwise a containment pan will be used to catch the leak. Any equipment which stores oil based products will be parked in the carbon bin and/or slurry containment areas. Any equipment which stores herbicides and/or pesticides will be parked inside of the building and/or the salt shed. All cleaning of the asphalt/slurry equipment will be done in the carbon bin. All cleaning of any other equipment will be done in designated wash-out areas only.

C. CREW MEMBERS INVOLVED:

1. 1 or more crew members

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) gloves

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** STORM DRAIN BASIN MAINTENANCE	**SOP NUMBER OR ACTIVITY CODE:** 263	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Keep basins free of debris and weeds mowed to a minimum height. This allows better water flow at all times and also adds a pleasing, aesthetic look to the City.

B. WORK PROCEDURES:

1. Clean the trash from the storm drain basins and haul it away. Cut the weeds around the storm drain basins and haul them away. Trim the trees if necessary and haul the limbs away.

C. CREW MEMBERS INVOLVED:

1. One Operator and up to three ROW workers

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety glasses
   b) Ear protection
   c) Safety boots
   d) Gloves
   e) Safety vests
2. F-550, 3 weed cutters, 3 leaf blowers
3. Skid steer with brush mower attachment

E. EQUIPMENT CLEANUP PROCEDURES:

1. All debris is to be dumped into the sweepings bin and taken to the landfill as is necessary.
2. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Work Order for this activity will be kept on Cityworks.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** Storm Drain Inspection	**SOP NUMBER OR ACTIVITY CODE:**	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

NA

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. To inspect storm drain boxes for damage, silt/debris, to determine if any maintenance/cleaning is required. Any box with silt of more than 50% of silt trap will require cleaning. Pipe is inspected for objects which can obstruct water flow and for silt/debris. Any pipe with more than 25% of flow obstructed is to be cleaned.

B. WORK PROCEDURES:

1. Arrive at location of storm water asset.
2. Remove lid or grate of storm water box. Use depth rod to measure amount of silt in silt trap. Use pole camera to look down all pipes leaving box. If an obstruction is seen in any pipe, a separate pipe inspection is to be completed for each line. Cityworks is used for all records.

C. CREW MEMBERS INVOLVED:

1. 1 or 2 man crew

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Steel toe boots
   b) Gloves
2. City Vehicle with warning lights

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Work Order for this activity will be kept on Cityworks.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** STREET SWEEPING	**SOP NUMBER OR ACTIVITY CODE:** 240	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

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Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. Sweep all city streets (5 times a year) in order to keep the city clean and to prevent traffic/pedestrian accidents from happening as a result of rocks and debris on the road ways. The street sweepers are also used per requests from Police dispatch to clean automobile accident residual and/or spills.
2. In the fall we prioritize sweeping in our work plans to collect as much of the Fall leaves as possible.
3. All areas of the City are treated as high priority as Jordan River is an impaired water, and water quality in Lake Park is of high importance to the City.

B. WORK PROCEDURES:

1. There are 4 street sweepers. Each Operator is given a map of area to be swept. All highlighted streets on the map are swept until the map is completed. Sweeping is not to be done during trash collection days. All sweeping maps as well as an index to determine trash collection are located at the Public Works Operations Facility.

C. CREW MEMBERS INVOLVED:

1. 4 Operator I-III- one for each sweeper

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Gloves
   b) Safety shoes

2. Sweeper

E. EQUIPMENT CLEANUP PROCEDURES:

1. Dump all solids from the hopper into the sweepings bin to be hauled to the landfill when necessary.
2. Proceed to the approved wash out area and clean the hopper thoroughly, including the internal screens and pick up tubes.
3. Wash the outside of the vehicle.
4. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Work Order for this activity will be kept on Cityworks.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** VACTOR OPERATIONS/STORM DRAIN CLEANING	**SOP NUMBER OR ACTIVITY CODE:** 262	**ISSUE DATE:** MM/DD/YYYY

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:
FOLLOW WVC CONFINED SPACE POLICY BEFORE ENTERING DRAIN

A. PURPOSE/DESCRIPTION:

1. Clean storm drain boxes and pipes. As this is a maintenance program for the storm drains, on the event of a flood, this crew will be used in various ways with similar goals in mind. The purpose and goal in cleaning the storm drains is to remove as much debris as possible in order to prevent any blockages from forming further down the pipes, and to improve the water quality in the overall storm water system.

B. WORK PROCEDURES:

1. Clean and remove storm drain lid/inlet cover. Clean silt and or debris from the bottom of the box. Jet wash the pipe up stream to the next lid or inlet box.
2. If entering a storm drain is required to clean the box, FOLLOW THE WEST VALLEY CITY CONFINED SPACE POLICY before doing so. Follow Confined Space Policy located in the “Policy Section” of the West Valley City Public Works Safety manual.

C. CREW MEMBERS INVOLVED:

1. 2 crew members

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety glasses
   b) Hard hat
   c) Steel Toe boots
   d) Ear protection
   e) Gloves

2. Vactor (vacuum truck), manhole lid puller

E. EQUIPMENT CLEANUP PROCEDURES:

1. Slowly dewater Vactor hopper into the designated wash out area to drain into sanitary sewer.
2. After dumping the water, proceed to the sweepings bin and fully dump any/all solids from the hopper.
3. Proceed to the approved wash area in order to wash the inside of the hopper and also the outside of the vehicle.
4. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1. Work Order for this activity will be kept on Cityworks.

	STANDARD OPERATING PROCEDURE **DEPARTMENT OF PUBLIC WORKS** **ACTIVITY:** **HAULING SNOW**	**SOP NUMBER OR ACTIVITY CODE:** 226	**ISSUE DATE:** 01/15/2012

APPROVED BY:

_____

Department Director or Division Head

PERMIT REQUIREMENT SUMMARY:

X.X.X.X.X Summary of Activity

TARGETED POLLUTANTS OR HAZARDS:

A. PURPOSE/DESCRIPTION:

1. To clear snow from main roads when it snows enough to build up on the side of the road that there is no longer enough room to put future snow.

B. WORK PROCEDURES:

1. Load snow into dump truck from side of road. Haul to UCCC overflow parking lot(the dirt part of the lot). The size of the crew will depend on the amount of snow that needs to be removed.

C. CREW MEMBERS INVOLVED:

1. 2 to 6 crew members

D. EQUIPMENT (IF APPLICABLE):

1. Personal Protective Equipment:
   a) Safety shoes, gloves, heavy coat
2. Loader(793), 10 Wheelers(1096), Bobtails(1067)

E. EQUIPMENT CLEANUP PROCEDURES:

1. If any equipment is used, it will be washed in the designated Equipment Wash Out Area which has two drain boxes that drain into the sanitary sewer

F. FORMS AND DOCUMENTATION:

1.

Emergency Response

301.1 PURPOSE AND SCOPE

The purpose of this policy is to ensure a safe and appropriate response to emergencies while maintaining the safety of department members and the public by requiring operators of department vehicles to conform to applicable Utah laws and regulations during an emergency response (Utah Code 41-6a-212).

All West Valley City Fire Department emergency vehicles, including ambulances shall be driven and operated in a safe manner during emergency response and non-emergency driving.

301.1.1 DEFINITIONS

Definitions related to this policy include:

Authorized emergency vehicle – Fire department vehicles and ambulances equipped as required by Utah law (Utah Code 41-6a-102; Utah Code 41-6a-212(1)).

Emergency response - Response to but not returning from any call for service or assistance involving fire, explosion or violent rupture; human rescue; human entrapment; illness or injury; hazardous materials release or threat of contamination; flooding; threatened or actual acts of violence; any explosive, bomb or threatened bombing; any act of terrorism; any natural disaster; or any other circumstance that presents a threat to life-safety or to property (Utah Code 41-6a-212(2)).

301.2 POLICY

It is the policy of the West Valley City Fire Department to appropriately respond to all emergency calls.

301.3 EMERGENCY CALLS

Fire personnel dispatched to an emergency shall proceed immediately, shall continuously operate emergency lighting equipment and shall sound the siren as reasonably necessary (Utah Code 41-6a-1625(4)(d)).

Responding with emergency lights and siren does not relieve personnel of the duty to act as a reasonably prudent emergency vehicle operator under the circumstances and to continue to drive with due regard for the safety of all persons (Utah Code 41-6a-212(7)(a)).

The use of any other warning equipment without a red light and siren does not provide any exemption from the Utah law.

Personnel should only respond with emergency lights and siren when dispatched to an emergency or when circumstances reasonably indicate an emergency response is required.

Personnel not authorized to respond with emergency lights and siren shall observe all traffic laws and proceed without the use of emergency lights and siren.

Ambulance Driving and Operation Procedure

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Driving Practices

301.4 MULTIPLE EMERGENCY VEHICLE RESPONSES

When more than one apparatus responds to an emergency, emergency vehicle operators should remain alert to the presence of other emergency vehicles and exercise due caution. Personnel must further exercise due caution in recognizing that traffic yielding to one emergency vehicle may not expect other emergency vehicles to follow.

301.5 INITIATING AN EMERGENCY RESPONSE

If a Captain believes an emergency response to any call is appropriate, the Captain shall ensure Valley Emergency Communication Center (VECC) is immediately notified.

301.6 RESPONSIBILITIES OF RESPONDING PERSONNEL

Emergency vehicle operators shall exercise sound judgment and care, with due regard for life and property, while operating a vehicle en route to an emergency response.

In addition, emergency vehicle operators should reduce speed at all intersections and should come to a complete stop at all blind street intersections or intersections where there is either a red light, a flashing red light or a stop sign. Emergency vehicle operators should also come to a complete stop at intersections whenever they reasonably believe they cannot account for traffic in approaching lanes or when vehicles have not yielded the right-of-way. After coming to a complete stop, emergency vehicle operators should only proceed when it is safe to do so.

The decision to continue an emergency response is at the discretion of the emergency vehicle operator or Captain. If, in the judgment of either individual, the roadway conditions or traffic congestion do not permit such a response without unreasonable risk, the response may be continued without the use of red lights and siren at the legal speed limit. In such an event, the Captain should ensure Valley Emergency Communication Center (VECC) is promptly notified. Personnel shall also discontinue the emergency response when directed by any supervisor.

301.7 FAILURE OF EMERGENCY EQUIPMENT

If the emergency equipment on the vehicle should fail to operate, the vehicle operator must terminate the emergency response and respond accordingly. In all cases, the Captain shall notify Valley Emergency Communication Center (VECC) of the equipment failure so that another apparatus may be assigned to the emergency response.

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Hazard Communication

1012.1 PURPOSE AND SCOPE

The purpose of this policy is to protect the health and safety of department members who may be occupationally exposed to hazardous chemicals in the workplace.

1012.2 POLICY

It is the policy of the West Valley City Fire Department to develop, implement and maintain a written chemical hazard communication program for members to use as a reference. The program shall minimally describe how department members will receive information and training on the criteria specified for labels and other forms of warning and Safety Data Sheets (SDS) (29 CFR 1910.1200; Utah Code 53-2a-702(6); UAC R614-1-4).

1012.3 PROCEDURE

The Fire Chief or the authorized designee should develop, implement and maintain a written chemical hazard communication program that includes, but is not limited to (29 CFR 1910.1200):

(a) A list of hazardous chemicals known to be present in the workplace. The list may be compiled for the workplace as a whole or for individual work areas.

(b) The methods the Department will use to inform and train members of the hazards of non-routine tasks and the hazards associated with chemicals in unlabeled pipes in member work areas.

(c) The Department shall make the written chemical hazard communication program available, upon request, to members, to their designated representatives and to the National Institute of Occupational Safety and Health (NIOSH).

(d) The Department shall establish a procedure to ensure that each container of a hazardous chemical is labeled, tagged or marked with the following information:

1. Identity of the hazardous chemical
2. Appropriate hazard warnings
3. Name and address of the manufacturer, importer or other responsible party

1012.4 SAFETY DATA SHEETS

The Department shall have an SDS for each hazardous chemical that is in use in the workplace. The SDS concerning a hazardous chemical shall be readily accessible to members and prepared in accordance with 29 CFR 1910.1200(g)(2).

1012.5 TRAINING REQUIREMENTS

See the Hazard Communication Program Training Policy.

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Hazard Communication Program Training

704.1 PURPOSE AND SCOPE

The purpose of this policy is to establish the required training regarding the department's hazard communication program. This policy identifies who must receive training, training content requirements, when additional or supplemental training is required and what record keeping is necessary to comply with state law (29 CFR 1910.1200; Utah Code 53-2a-702; UAC R614-1-4).

704.1.1 DEFINITIONS

Definitions related to this policy include (29 CFR 1910.1200):

Hazardous chemical - Any chemical that is classified as a physical hazard, health hazard, simple asphyxiant, combustible dust, pyrophoric gas or hazard not otherwise classified.

Health hazard - A chemical that is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure), skin corrosion or irritation, serious eye damage or eye irritation, respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, reproductive toxicity, specific target organ toxicity (single or repeated exposure), or aspiration hazard.

704.2 POLICY

It is the policy of the West Valley City Fire Department, in accordance with the Hazard Communication Policy, to provide members with effective information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new hazard is introduced.

704.3 TRAINING REQUIREMENTS

The initial hazard communication program training shall include, but is not limited to, the following topics:

(a) Members shall be informed of any operations in their work area where hazardous chemicals are present.

(b) Members shall be informed of the location and availability of information regarding any hazardous chemicals and Safety Data Sheets (SDS), as required by the state.

(c) Members shall be trained in the methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.

(d) Members shall be trained in the physical and health hazards of the chemicals in the work area and the measures they can take to protect themselves, including specific procedures the Department has implemented to protect them from exposure to hazardous chemicals. These include appropriate work practices, emergency procedures and personal protective equipment (PPE).

(e) Members shall be provided with an explanation of the labeling system and the SDS, and how they can obtain and use the appropriate hazard information.

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704.4 TRAINING RECORDS

The Training Officer shall be responsible for maintaining records of all hazard communications program training provided to members. Records should include, but are not limited to:

(a) The dates of the training sessions.

(b) A list of the topics or a summary of the content of the training sessions.

(c) The names or other identifiers and job titles of the members who received the training.

(d) The names, certificate numbers and qualifications of persons conducting the training.

The Training Officer should maintain the training records in accordance with established records retention schedules.

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WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Liaison Officer	HM 008
	Rev. 02/09

SCOPE

The Haz-Mat Liaison Officer may be utilized by Command to facilitate communications with the Hazardous Materials Branch, Division, or Group. This position should be created when the hazardous materials operation is complex and/or very hazardous. Since the Haz-Mat Officer may be very involved, such a Liaison Officer will provide another communications link with Command. This link will help maintain the flow of information in a more timely and efficient manner. This Liaison Officer may also be used by Command to provide critical communications between the Haz-Mat Branch, Division, or Group and other Branches and Divisions; to work directly with outside agencies or individuals with special knowledge who need to interact with Haz-Mat personnel.

RESPONSIBILITIES

The primary responsibilities of the Haz-Mat Liaison Officer are:

- Acquire briefings for Command and the Haz-Mat Officer in Charge.
- Understand Command's plan for the incident.
- Understand the plan of the Haz-Mat operation.
- Work with any company officials at the site to assure proper communications with the public
- Assist with Technical Experts who may be called to the incident
- Assist Command with clean-up, company contacts, and instructions at the site
- Monitor radio traffic at the incident.
- Provide face to face communication with Command, the Haz-mat Branch, Division, or Group and any other Branch, Division, or Group as directed.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Logistics Equipment Support	HM 010
	Rev. 4/09

RESPONSIBILITIES

The primary responsibility of the Equipment Team and Officer is to provide the necessary equipment and materials for the Site Control Team, Research Team, Entry Team, Back-up Team, Decon Team, and Medical Team. Once designated, the Equipment Officer must assign team members in a way that allows each team within the division or group to acquire the necessary state of readiness within a time frame that compliments the sequence of events dictated by the action plan.

HAZ MAT RESPONSE VEHICLE(S)

The Haz-Mat response vehicle(s) shall be checked at the beginning of each shift to insure that all required inventories are accounted for and that all equipment, including computers and monitoring devices, are in the ready state. Any deficiencies in inventory or equipment failures shall be reported to the on duty Haz-Mat Captain for correction. During this check-out, a Haz-Mat technician shall be designated as the Equipment Officer for the shift, and this individual, along with other assigned team members, will be responsible for providing materials and equipment for all teams within the Haz-Mat operation.

ARRIVAL

Upon arriving at the scene, Haz-Mat response vehicles will stage until the Haz-Mat Officer in Charge (Branch or Division) has met with Command. Upon completion of the initial briefing, the Haz-Mat Officer in Charge will direct the Haz-Mat response vehicle(s) to the location where set-up will begin. At that location, the Equipment Officer will begin preparing to support the entire Haz-Mat operation with material and equipment resources.

SET-UP

Prior to being given further direction by the Haz-Mat Officer in Charge, the Equipment Officer will prepare the area for the Research/Communication Team to begin carrying out their assigned functions. From that point, he or she will identify and begin to set-up areas for the Entry Team and Back-up Teams to dress. Each of these areas will be labeled (in coordination with the Site-Control Officer).

DISTRIBUTION

Based upon the Haz-Mat Incident Action Plan and direction from the Haz-Mat Officer in Charge, the Equipment Officer and Team will begin to pull and lay out the protective clothing and

communications equipment for the Entry and Back-up Teams. This will be followed by setting out all required monitoring equipment and devices. Any electronic equipment will be warmed up, checked and calibrated by the Equipment Team prior to use by the Site Control and/or Entry Team members. Based on instructions, the Equipment Officer will also insure that all equipment and materials for spill control have been acquired, checked, and set next to the access control point prior to the Entry Team going on air.

After the needs of Research, Site Control, Entry, and Back-up have been satisfied, the Equipment Officer and Team will begin to supply and equip the Decon and Medical Teams. A dressing area in the Cold Zone will be identified by the Decon Officer, and the Equipment Team will deliver the necessary protective clothing items as well as decon equipment, tools, and supplies to that dressing area. From there, the Equipment Officer will also provide protective clothing, along with necessary plastic to provide exposure protection for all medical personnel and transportation vehicles. These materials should also include garments or materials to place on potentially contaminated patients.

TERMINATION

At the conclusion of the incident, the Equipment Officer is responsible to retrieve all decontaminated equipment and unused materials. As the Haz-Mat vehicles are being readied for service at the close of an incident, a complete inventory will be taken. Any missing items or damaged/ruined equipment shall be replaced based upon availability or report to the Support Services Officer so that replacement can be made.

Hazardous Materials (HAZMAT) Training

705.1 PURPOSE AND SCOPE

The purpose of this policy is to establish training that will meet state requirements regarding the West Valley City Fire Department Hazardous Materials (HAZMAT) response program. This policy identifies the level of training members must receive, when additional or supplemental training is required, and the training records required to meet the requirements of Utah Occupational Safety and Health (UOSH).

705.2 POLICY

It is the policy of the West Valley City Fire Department that any member whose duties include a role in the HAZMAT response program shall receive training to the level at which they are expected to operate in a HAZMAT environment or at an incident involving hazardous materials.

705.3 TRAINING REQUIREMENTS

HAZMAT training shall be based on the duties and functions to be performed by each member. This includes training specific to the Incident Commander (IC), awareness or operations level, and HAZMAT technician (29 CFR 1910.120; UAC R614-1-4).

Competencies required for all new members shall be conveyed to them through training before participating on an incident. Any member who participates or is expected to participate in an emergency response involving HAZMAT shall objectively demonstrate competency in the following areas.

705.3.1 FIRST RESPONDER AWARENESS

First responder awareness level training should be provided to all individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. A member with this level of training should demonstrate competency in the understanding and recognition of a hazardous substance release.

705.3.2 HAZMAT FIRST RESPONDER OPERATIONS (FRO)

First responder operations (FRO) level training should be provided for individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property or the environment from the effects of the release. A member with this level of training is trained to respond in a defensive fashion without actually trying to stop the release. This member's function is to contain the release from a safe distance, keep it from spreading and prevent exposures.

705.3.3 HAZMAT TECHNICIAN

HAZMAT technician level training should be provided to all individuals who respond to releases or potential releases of hazardous substances for the purpose of stopping the release. A member

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with this level of training would assume a more aggressive role by approaching the point of release in order to plug, patch or otherwise stop the release of a hazardous substance.

705.3.4 HAZMAT INCIDENT COMMANDER
HAZMAT IC level training should be provided to all individuals who could be responsible for all decisions relating to the management of a HAZMAT incident.

705.3.5 HAZMAT EMERGENCY RESPONSE PLAN
An emergency response plan shall be developed and implemented to address pre-emergency planning and coordination with additional responders prior to the commencement of emergency response operations. The plan will identify members' roles, lines of authority, and communications for all members. The plan shall be in writing and available for inspection and copying by employees, their representatives, and UOSH personnel (29 CFR 1910.120; UAC R614-1-4).

705.3.6 HAZMAT ANNUAL REFRESHER TRAINING
Members who receive an initial level of training in accordance with this policy shall receive annual refresher training of sufficient and necessary content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly (29 CFR 1910.120; UAC R614-1-4).

705.4 BASELINE PHYSICAL FOR HAZMAT TEAM MEMBERS
Members of an organized, designated HAZMAT team shall receive a baseline physical examination. The federal Occupational Safety and Health Administration (OSHA) requires that medical examinations and consultations be made available to members of HAZMAT teams within prescribed time periods. All members of a designated HAZMAT team shall receive medical examinations and consultations on the following schedules (29 CFR 1910.120; UAC R614-1-4):

(a) Prior to assignment

(b) At least once every 12 months

(c) At termination of employment or reassignment to duties not covered by this policy

(d) As soon as possible upon notification that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards

(e) As soon as possible upon notification that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation

The frequency of a member's examinations may be increased if the examining physician determines that it is medically necessary. Medical examinations should include medical and work history. Emphasis should be placed on any symptoms related to the handling of, or exposure to, hazardous substances or health hazards. Medical examinations should address fitness for duty, especially as it pertains to wearing personal protective equipment under conditions that may

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be encountered on-duty. The content of medical examinations should be made available to the member as determined by the attending physician.

705.4.1 HAZMAT MEDICAL SURVEILLANCE

Members of an organized and designated HAZMAT team shall receive a baseline physical examination and be provided with medical surveillance (29 CFR 1910.120; UAC R614-1-4).

Any emergency response member who exhibits signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident, either immediately or subsequently, shall be provided with medical consultation.

Accurate records of the medical surveillance required by this policy shall be retained for the duration of the member's employment plus 30 years. This record shall contain at a minimum the following information:

(a) The name and Social Security number of the member.

(b) The physician's written opinions, recommended limitations, and results of examinations and tests.

(c) Any member medical complaints related to exposure to hazardous substances.

(d) A copy of the information provided to the physician by the Department, with the exception of department policies and OSHA standards.

705.5 TRAINING RECORDS

The Training Officer shall be responsible for maintaining records of all HAZMAT training provided to members. Records should include but are not limited to:

(a) Dates of the training sessions.

(b) A list of the topics or a summary of the content of the training sessions.

1. Specific content required by regulation covered
2. Manufacturer's recommendations (as applicable)
3. Manufacturer's operations/service/maintenance manuals (as applicable)

(c) The names or other identifiers and job titles of all members who received the training.

(d) The names, certificate numbers and qualifications of persons conducting the training.

(e) Demonstration that learning took place (e.g., evaluation, quiz, test).

The Training Officer should maintain the training records in accordance with established records retention schedules.

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Hazardous Materials Response

316.1 PURPOSE AND SCOPE

Hazardous materials (HAZMAT) may include toxic, flammable, corrosive, explosive, radioactive or reactive materials; materials that can cause health hazards; or a combination of these materials. The purpose of this policy is to provide a general framework for handling a HAZMAT incident.

316.2 POLICY

It is the policy of the West Valley City Fire Department to protect the safety of the public and responders to HAZMAT incidents and to comply with all applicable state and federal laws during the management and mitigation of all HAZMAT incidents (29 CFR 1910.120; Utah Code 53-2a-702).

316.3 RESPONSIBILITIES

All HAZMAT responses should be managed using the National Incident Management System (NIMS) and the Incident Command System (ICS) in accordance with Utah Division of Emergency Management (DEM) regulations for emergency response and applicable federal laws.

316.3.1 INITIAL ACTIONS

If available, information should be provided by Valley Emergency Communication Center (VECC) to the units responding to a HAZMAT incident including the name and type of the material involved (e.g., hydrochloric acid, corrosive), the size and quantity of the containers involved, the nature of the problem (e.g., spill, leak) and any known dangerous properties of the materials.

The first-arriving unit approaching the incident should use caution, approach from upwind and upgrade of the incident, establish Incident Command and begin a size-up of the situation. The purpose of the size-up by the first-in company is to determine the nature and severity of the HAZMAT incident and formulate an initial Incident Action Plan (IAP). While it may be necessary to take immediate action to make a rescue or evacuate an area, any action should be taken with an awareness of the risk to department personnel and making appropriate use of available protective equipment. It is important to avoid the premature commitment of personnel to potentially hazardous locations. In some cases, isolating the incident and denying entry until more resources arrive may be the safest approach.

In assessing the incident, all available references should be used to determine the hazards that are or potentially could be present. These references may include, but are not limited to, the U.S. Department of Transportation (DOT) Emergency Response Guidebook, the National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards, Safety Data Sheets (SDS), HAZMAT business plans, manifests or bills of lading, National Fire Protection Association (NFPA) placards, U.S. DOT placards and United Nations Substance Identification Numbers. Other sources of information may be available, such as the Chemical Transportation Emergency Center (CHEMTREC®), facility personnel, department specialists or manufacturers of the materials involved.

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The hazards presented by a HAZMAT incident may change significantly as the materials interact with other materials, the surrounding environment and the actions taken by responders. Responders should consider site topography, surroundings, other potential hazards and prevailing weather conditions. The initial perimeter established for the incident may need to be expanded to establish the appropriate control zones for the response (e.g., exclusion zone, contamination reduction zone, support zone).

316.4 INCIDENT ACTION PLAN

The primary goal of the IAP will be to protect the safety of the public and responders. The initial IAP should focus on identifying a safe approach for other arriving units, determining the type of hazard and the scope of the incident, isolating the area and denying entry to the public, determining incident-specific personal protective equipment (PPE) and initiating notifications. The initial IAP may be a written document or may be notes kept and controlled by the Incident Commander (IC). The initial IAP should include the following minimum information:

(a) Incident name, agency or unified command and command post location.

(b) Information for responding units on the best route of travel, staging locations and minimum isolation distances to maintain the safety of responding members.

(c) The information available on the products involved or an indication that the products are not yet known.

(d) The incident control objectives and goals.

(e) An incident site safety plan and designation of a Haz mat Incident Safety Officer.

(f) A communications plan including radio frequencies and contact telephone numbers.

When a HAZMAT incident response will be prolonged and will extend beyond an initial operational period, a written IAP should be developed. The written IAP shall utilize standard NIMS/ICS forms that may include, but are not limited to:

- ICS-201 Incident Briefing
- ICS-202 Incident Objectives
- ICS-203 Organizational Assignment List
- ICS-204 Assignment List
- ICS-205 Incident Radio Communications Plan
- ICS-206 Medical Plan
- ICS-207 Incident Organization Chart
- ICS-208 Site Safety and Control Plan

316.5 RESOURCE CONSIDERATIONS

Most HAZMAT incidents will require the IC to request additional resources in order to implement the IAP and safely mitigate the hazard.

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The response to a HAZMAT incident may require a large amount of specialized resources to achieve incident stabilization and return to normal operations. The IC should consider involving:

(a) Specialized HAZMAT teams at the technician and/or specialist levels for assistance with mitigating the release of material. Teams may be operated by local or regional fire agencies, military or private industry.

(b) Specialized operators or contractors to address post-response mitigation, removal, cleanup and required disposal of material.

(c) Local law enforcement for assistance with scene security and evacuation, if necessary.

(d) Activation of local, regional or Utah HAZMAT emergency response teams for assistance.

(e) United States Coast Guard assistance for spills affecting waterways.

(f) Public works and road departments for diking, diversion or other activities.

Resources shall be coordinated using NIMS/ICS as the response is reinforced. It is important that duties assigned to personnel are suitable for their level of training under federal regulations and Utah law. It is also important to consider the limitations of available PPE and the limitations of chemical detection or monitoring equipment on hand when preparing to commit personnel to a potentially hazardous area.

316.6 NOTIFICATIONS

Managing the response to a HAZMAT incident may involve required notifications to various local, regional, state or federal agencies. ICs should consider notifying the following agencies when applicable or required:

(a) The public, media and other affected entities, such as schools and businesses

(b) Adjoining jurisdictions that may be impacted by incident activities

(c) Local and regional elected officials and emergency management personnel

(d) Utah DEM

(e) Utah State Fire Marshal's Office Hazardous Materials Section

(f) Utah Department of Health (UDOH)

(g) Utah Department of Environmental Quality (DEQ)

(h) Utah Department of Transportation (UDOT)

(i) Utah Highway Patrol (UHP)

(j) United States Environmental Protection Agency National Response Center

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WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Mass Decon	HM 013
	Rev. 4/09

INTRODUCTION

The use of the word "Product" in this SOG may also be referring to other sources of potential contamination. "Product" may also include, but is not limited to: Biological, Radiological, Chemical, WMD, and other forms of foreign contamination that can or will cause harm to living organisms or the environment.

This guideline provides the basic philosophy and strategy for situations requiring the decontamination of large numbers of people who have been exposed to or contaminated by the release of hazardous materials. These hazardous materials may be released accidentally in transportation, released from a fixed facility, or other releases of potentially dangerous or lethal chemicals during the commission of a crime or terrorist act. Because of the potential scale of an event this size, it is extremely important that the incident command system be established immediately upon arrival and a strong command structure be maintained to ensure coordinated efforts on the parts of all personnel and agencies involved.

It is important to note, if large gatherings of people have been exposed to a release of potentially lethal products, they need to be brought under control by arriving fire and police units. The potential exists for cross-contamination of response personnel. When entering the scene of these emergencies, it is important that all personnel are protected by the appropriate levels of PPE which may include chemical "splash" protection and SCBA.

FIRST ARRIVING UNIT

The first arriving unit will size-up the situation and establish command. Care must be taken to avoid exposing crews to contamination and secondary devices. If information has been received that a chemical release has occurred, size-up may have to take place from an area away from contamination and evacuees that may be contaminated. Once command has been established and size-up completed, crews can be assigned specific tasks and group or sector assignments given. Examples of assignments may be: "Recon", "Haz-Mat", "Search and Rescue", and "Decon". This SOG will address "Mass-Decon" and it is important to note: "The Incident Commander must use their own judgment and skills when deciding if MASS-DECON is going to be implemented following a product release."

THE ACTION PLAN

Based on the initial size-up and any other information available, the incident commander will formulate an action plan to deal with the situation.

This "Action Plan" must provide for:

- Isolation of the area
- Securing the area (law enforcement)
- Evacuation (are evacuees contaminated?)
- Rescue (are there victims who are savable?)
- Decontamination (How many? What type?)
- Treatment of patients
- Protect exposures (life, environment, property)
- Provide for the safety of all (responders and citizens)

THE HAZMAT DIVISION/GROUP

Once the Haz-Mat group has been established, a mass-decon group must be created. It is important to note: Mass-decon is used for people who must have contaminants rapidly removed from their persons to avoid serious illness or death and to keep the spread of harmful contaminants to a minimum. Care should also be taken to prevent cross-contamination of response personnel during mass-decon. This is achieved by the use of appropriate levels of PPE for those involved in the mass-decon group.

THE HAZMAT DECON GROUP

Decontamination by removing clothes and flushing or showering with water is the most expedient and practical method for mass-casualty decon. Disrobing and showering meets all the purposes and principles of decontamination. Showering is recommended whenever liquid transfer from clothing to skin is suspected or possible. Disrobing should occur prior to showering for chemical agents however, the decision to disrobe should be made by the Incident Commander based on the situation and the type of chemical released. Wetting down casualties as they start to disrobe speeds up the decontamination process and is recommended for decontaminating biological or radiological casualties. However, this process may:

- Force chemical agents through the clothing.
- Decrease the potential capability of directly showing skin afforded by water pressures and dilution.
- Relocate the chemical agent within the actual showering area, thereby increasing the chance of cross-contamination spread by personal contact with the material or showering run-off water.

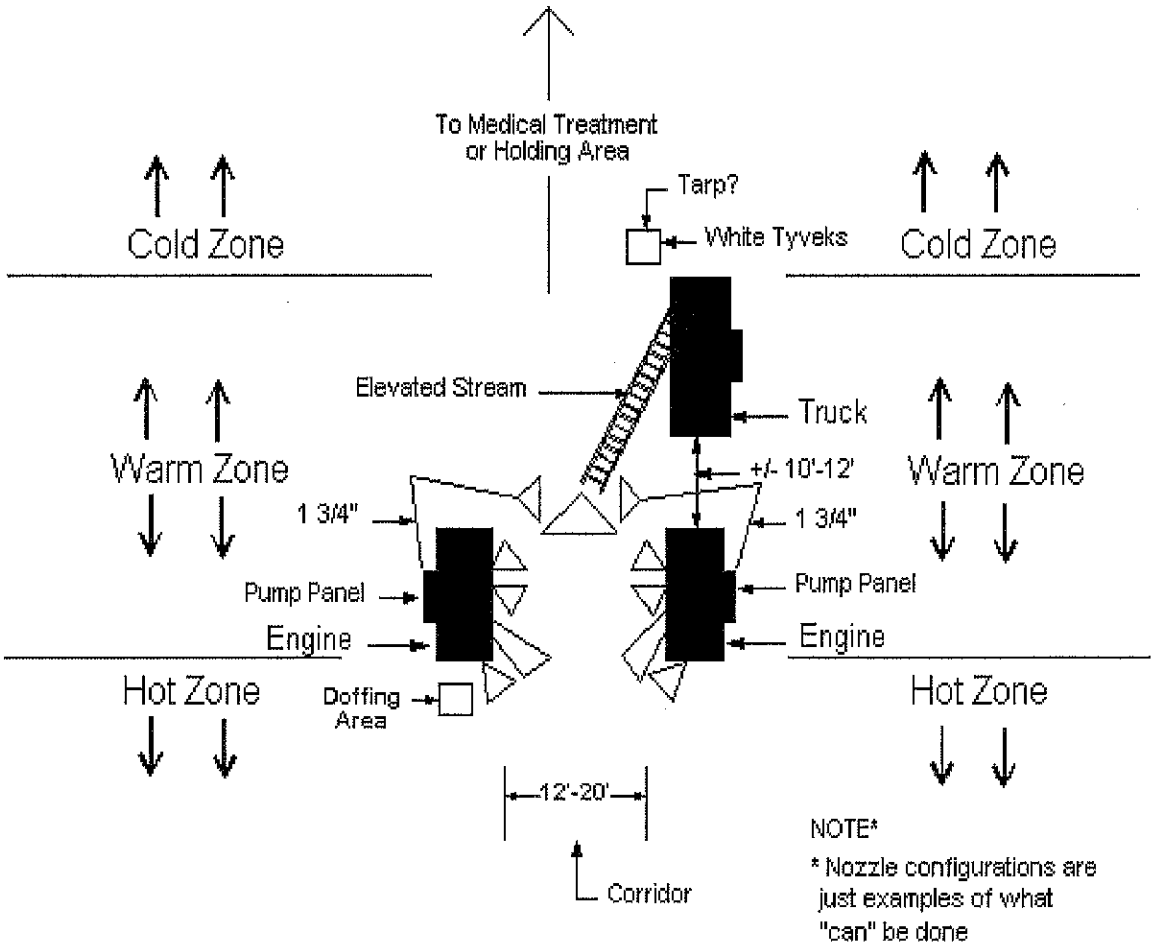
It is recommended that victims remove clothing completely. However, victims unwilling to disrobe should be informed of the potential hazards of remaining in contaminated clothing. Victims should be encouraged to remove as much clothing as possible, proceeding from head to toe. White tyvek coveralls shall be provided for all victims who have been decontaminated. This will provide for modesty protection as well as an identifier of victims who have been through the decontamination process and can proceed to the holding areas or medical treatment areas.

Important note: It is recommended that emergency responders use a high volume of water for mass-decon delivered at a minimum of 60 pounds per square inch (psi). It is also important to note:

certain nozzle will not deliver adequate streams for effective decontamination and you should select nozzles that will deliver appropriate streams and patterns at 60 psi.

THE DECON PLAN (setting up)

HOT AND COLD ZONES



Concurrently with the set-up of the mass-decon corridor, hot and cold zones should be established. The "Hot" zone being on the side where potentially contaminated victims would enter the decon corridor. The "Cold" zone would begin at the point where victims have been decon, dressed in tyvek, and prepared for medical screening or evacuation. All areas between these points would be considered the "Warm" zone being the area of apparatus placement for the establishment of the actual "corridor." These areas should be secured and well marked to prevent access of unauthorized personnel to reduce the risk of cross-contamination of response personnel as well as civilians.

CRIME SCENE?

The individual in charge of the decon corridor should always keep in mind: "He or she may be

dealing with a crime scene!" Keep these things in mind:

- Every action that can or will be taken may be considered evidence.
- The potential for destruction of evidence exists and every step should be taken to preserve evidence.
    a) Does victim clothing need to be individually bagged and tagged?
    b) Are the proper security precautions bring taken to ensure victim and responder safety?
    c) Is proper "documentation" of your actions taking place?
- Mass Decon can be a bit of a walk in order to place it in an area that is safer from secondary devices and have the ability to control run-off.

IMPORTANT NOTES

- The decon group supervisor needs to have a plan in advance on where he or she will send decontaminated victims for shelter. Some of those options are:
    a) Other non-contaminated structures capable of supporting a large influx of people.
    b) Tents
    c) Buses (school buses or Transit Authority buses)
    d) Other forms of shelter that can quickly be mobilized and brought to the scene.
- Use as few personnel as possible to actually run the corridor.
    a) Only one APO (apparatus pump operator) would be required to maintain water flows once the corridor is established and the flow of water begins.
- You may have to shut down some of the "non-pumping" apparatus to limit the amount of carbon monoxide in the corridor.
- Hose-lines will impede the flow of decon water away from the decon corridor. Use cribbing or other tools under the hoses to allow used decon water to flow away from the corridor.
- A minimum of Full PPE and "splash" protection should be worn in the decon area by anyone who is involved. This includes all personnel who are actively involved in decontamination. Security and law enforcement personnel should also don "splash" protection if they are required to work in proximity to the decon corridor.
- All efforts should be made to ensure the dignity of those individuals who need to disrobe. "Privacy corridors" can be established quickly using tarps and other fire apparatus if available.
- Look at drainage when the corridor is established. Try and establish the decon corridor in the higher area where run-off flows perpendicular and away from response personnel and victims.
- Victims may be young, elderly, weak, strong or injured. Remember: What is it going to be like if the temperature outside is 25 degrees and water temperature 45 degrees and you have to tell people to "take off their clothes and walk through a cold shower." Have a plan and have compassion for those who are about to do this too.
- Technicians and non-ambulatory victims will not be taken thru the mass-decon corridor unless ordered by command. Other decontamination corridors will be established for response personnel and non-ambulatory victims.
- The use of (2) engines and (1) truck to establish the mass-decon corridor may not be possible. You may only have one or two pieces of apparatus available to perform mass-decon. "Know your tools and know how they function." Know the purpose of mass-decon" and "Know your capabilities"

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Protection Totes	HM 015
	Rev. 4/09

SCOPE

We respond to a variety of incidents that pose high risk potential to firefighters. This procedure identifies the steps to follow and the use of all the equipment in our chemical protection totes carried on all front-line apparatus.

USAGE OF CHEMICAL PROTECTION TOTES

This guideline shall be put to use whenever chemical protection is warranted in the performance of our duties. The equipment in these totes is for the protection of our personnel, the protection of the public, and the isolation (if necessary) of contaminated areas or victims of a chemical accident, spill, or terrorism related event. The equipment in these totes is listed below:

TOTE CONTENTS

- (4) Yellow (size 6x) Tyvek "Splash" suits - for crew protection over the top of turn-out gear.
- (4) White (size 3x) Tyvek outer garments - for victims who have been decontaminated following possible contamination at any type of chemical, biological, or possible WMD event. They may also be used for medical emergencies where blood borne pathogens may be present and the safety of the crew and emergency responders may be in question. They may also be used as the engine, truck, or other emergency responders see fit at the scene of any emergency.
- (1) box latex gloves
- (1) Roll duct tape - to seal openings on Tyvek outer garments of responders.
- (1) Roll (red) 3" wide isolation flagging - to isolate victims and/or establish "Hot Zones" prior to the arrival of Haz-Mat teams or command staff.
- (1) ERG: DOT's, Emergency Response Guidebook
- (1) NIOSH, Pocket Guide to Chemical Hazards
- (1) Digital photograph of tote's contents for crew reference.

EXAMPLES OF POTENTIAL TOTE USES

- Any suspected hazardous material presence
- Any suspected terrorism (WMD) event
- Any suspected presence of blood borne pathogens
- Any event where isolation of the area is necessitated or suspected
- Where any member of the crew involved sees a necessity for the use of any/all equipment at their disposal.

COMMAND IMPLEMENTATION

Whenever any of the equipment in these totes has been used at the scene of an event or suspected event, first arriving units will inform all other responding units of the potential risks involved. Responding units that are not trained hazardous materials technicians understand they will not be expected to enter potentially contaminated areas, take unnecessary risks, or render safe any potential devices or containers while using this equipment. The items in these totes are for their protection and the protection of the public should a chemical event occurs. Crews will follow all department SOG's regarding response and the necessary steps to take regarding all incidents.

Whenever any equipment in the totes have been used, whoever is in-charge of the crew that day will contact any Haz-Mat team member for immediate restocking and resealing of the tote for any future use.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Command Considerations	HM 001
	Rev. 12/08

This plan provides a basic philosophy and strategic plan for hazardous materials situations. All West Valley City Fire Department Standard Operating Guidelines, unless superseded by a specific part of this plan, remain in effect for Hazardous Materials incidents.

Hazardous Materials incidents encompass a wide variety of potential situations including fires, spills, transportation accidents, chemical reactions, explosions and similar events. Hazards involved may include toxicity, flammability, radiological exposure, corrosives, explosives, health, and chemical reactions or a combination of factors. This plan provides a general framework for handling a hazardous materials incident, but does not address the specific tactics or control measures for particular incidents.

Every incident presents the potential for exposure to hazardous materials; even the products of combustion of an ordinary fire may present severe hazards to personnel safety.

This procedure is specifically applicable to known hazardous materials incidents, but it does not reduce the need for appropriate safety precautions at every incident. The use of full protective clothing and SCBA as well as special protective clothing and the use of all Standard Operating Procedures on a continuing basis are foundational for this plan.

DISPATCH

The dispatch Center will obtain any and all possible information from the person reporting a hazardous materials incident. The information should, if possible, contain material name and/or type, amount and size of the container(s), problem (leak, spill, fire, etc.), and dangerous properties of the materials as well as the number of persons injured or exposed. The incident taker will remain on the telephone with the caller to obtain additional information after entering the call for dispatch.

Any additional information shall be relayed to responding units after dispatch. This should include the safest approach or best access to the incident if available.

If the call comes from a person with particular knowledge of the hazardous situation, that person should be instructed to meet and direct the arriving units. Dispatch shall relay that person's location and level of knowledge to responding units. The dispatch will dispatch the appropriate Hazardous materials response.

Dispatch will inform units as to the prevailing wind speed and direction from the monitoring station nearest the incident and advise responding units.

FIRST ARRIVING UNIT

The first arriving officer will establish Command and begin a size-up. The first unit must consciously avoid committing itself to a dangerous situation. When approaching, slow down or stop to assess any visible activity taking place. Evaluate effects of wind, topography and location of the situation. Route any other responding companies away from any hazards.

Command should consider establishing level II staging whenever possible for other responding units. Staged companies must be in a safe location, taking into account wind, spill flow, explosion potential and similar factors in any situation. The DOT Guidebook, NFPA reference materials, NIOSH pocket guide, or any other material such as MSDS or shipping papers available should be used to establish a safe distance for staging.

SIZE-UP

Command must make a careful size-up before making a commitment. Such size-up should be based on dispatch information, observation, reconnaissance, and any preplanning that is available. It may be necessary to take immediate action to make a rescue or evacuate an area. This should be attempted only after a risk/benefit analysis is completed. Personnel must take advantage of personal protective equipment in these situations.

The objective of the size-up is to identify the nature and severity of the immediate problem and to gather sufficient information to formulate a valid action plan. Hazardous materials incidents require a cautious and deliberate size-up.

Avoid premature commitment of companies and personnel to potentially hazardous locations. Proceed with caution in evaluating risks before formulating a plan and keep uncommitted companies at a distance. In many cases, evaluation by hazardous materials team members before committing is the safest approach.

Identify a hazardous area based on potential danger, taking into account materials involved, time of day, wind and weather conditions, location of the incident and degree of risk to unprotected personnel. Take immediate action to evacuate and/or rescue persons in critical danger, if possible, providing for safety of rescuers first.

The primary objective is to identify the type of materials involved in the situation, and the hazards presented, before formulating a plan of action. Look for labels, markers, DOT identification numbers, NFPA diamond or shipping papers, etc. Refer to pre-fire plans, and personnel at the scene for additional information (plant management, responsible party, truck drivers, and fire department specialists). Use reference materials carried on apparatus and have dispatch contact other sources for assistance in sizing-up the problem (state agencies, fire department specialists, manufacturers of materials, etc.).

ACTION PLAN

Based on the initial size-up and any information available, Command will formulate an action plan

to deal with the situation.

The Action Plan Must Provide For:

- Isolation of the area (using tape to create zones)
- Securing the area (with PD if possible)
- Evacuation (of cold zone as necessary)
- Rescue victims (while avoiding exposures)
- Treat patients (after initial decon)
- Protect exposures (property/environment)
- Provide for the safety of all (responders and citizens)

Most hazardous materials are intended to be maintained in a safe condition for handling and use through confinement in a container or protective system. The emergency is usually related to the material escaping from the protective container or system and creating a hazard on the exterior. The strategic plan must include a method to control the flow or release, get the hazardous material back into a safe container, neutralize it, allow it to dissipate safely, or coordinate proper disposal.

The specific action plan must identify the hazard control and identify the resources necessary to accomplish this goal. It may be necessary to select one method over another due to the unavailability of a particular resource or to adopt a 'holding action' to wait for needed equipment or supplies.

Avoid committing personnel and equipment prematurely or 'experimenting' with techniques and tactics. Many times it is necessary to evacuate and wait for special equipment or technical help.

As a general policy, the Hazardous Materials Team will respond to any situation where a private contractor is required to clean up hazardous materials.

CONTROL OF HAZARDOUS AREA

A hazardous material incident has two initial zones associated with the scene, similar to a fire. They are the WARM ZONE and the COLD ZONE.

WARM ZONE

The Warm Zone is the area in which personnel are potentially in immediate danger from the hazardous condition. This is established by Command and controlled by the fire department. Access to this area will be rigidly controlled and only personnel with proper protective equipment and an assigned activity will enter. All companies will remain in tact in designated staging areas until assigned. Personnel will be assigned to monitor entry and exit of all personnel from the Warm Zone. The Warm Zone should be geographically described to all responding units, if possible and identified by yellow fire line tape. (A Lobby Control Division or Group will be established to control access to the Warm Zone and maintain an awareness of which personnel are working in the area.)

- Establish a safe perimeter around hazardous area and identify with Hazard Zone tape.
- Request adequate assistance to maintain the perimeter.
- Identify an entrance/exit point and inform Command of its location.

- Coordinate with Haz-Mat Group to identify required level of protection for personnel operating the Hazard Zone.
- Collect/return accountability PASSPORTS of all companies entering/leaving the controlled area.

Restriction of personnel access into the Warm Zone includes not only fire department personnel, but any others who may wish to enter the Warm Zone (Police, press, employees, tow truck drivers, ambulance personnel, etc.). Command is responsible for everyone's safety.

COLD ZONE (EVACUATION ZONE)

The Cold Zone is the larger area surrounding the Warm Zone in which a lesser degree of risk to personnel exists. All civilians would be removed from this area, which is used by fire department personnel to establish a hazardous materials operation. The limits of this zone will be enforced by the police department based on distances and directions established in consultation with Command. The area to be evacuated depends on the nature and the amount of the material and type of risk it presents to unprotected personnel (toxic, explosive, etc.).

In some cases, it is necessary to completely evacuate a radius around the site for a certain distance (i.e., potential explosion). In other cases, it may be advisable to evacuate a path downwind where toxic or flammable vapors may be carried (and control ignition sources in case of flammable vapors).

Reference: Evacuation Group, Police Liaison Officer.

NOTE: When toxic or irritant vapors are being carried downwind, it may be most effective to, (shelter in place), keep everyone indoors with windows and doors closed to prevent contact with material instead of evacuating the area. In these cases, companies will be assigned to patrol the area assisting citizens in shutting down ventilation systems and evacuating persons with susceptibility to respiratory problems.

In all cases, the responsibility for safety of all potentially endangered citizens rests with Command. Once the Hazardous Materials Group has been established, Haz-Mat personnel will define a Hot Zone and re-establish Warm and Cold Zones as needed. These zones will remain in effect for the remainder of the incident unless circumstances dictate further adjustments.

USE OF NON-FIRE DEPARTMENT PERSONNEL

In some cases, it may be advantageous to use non-fire department personnel to evaluate hazards and perform certain functions within their area of expertise. When such personnel are outfitted with breathing apparatus, chemical suits, etc., they must be aware of the functions, limitations and safety precautions necessary in their use. Fire department personnel with the necessary protective equipment must closely monitor and/or accompany such personnel for safety.

BE AWARE THAT COMMAND IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL INVOLVED IN ANY INCIDENT.

COMMAND

At any working hazardous materials incident, Command should be passed to the on-duty Battalion Chief or Shift Commander. Before taking command, this officer should also perform size-up (based on dispatch information, radio traffic, observation, reconnaissance and any available preplanning). Once Command has been transferred, this officer must perform the following on-going functions until the incident has been stabilized:

- Provide for on-going size-up
- Update and adjust the plan as required
- Expand the organization as needed (provide for branches and divisions)
- Establish a hazardous materials branch or division for all working incidents
- Acquire continuing progress reports
- Acquire and coordinate resources (make necessary notifications)
- Make assignments (to achieve goals and support the plan)
- Provide for a safety officer (to continually monitor the scene and provide feedback for Command)
- Consider a separate TAC Channel for Haz-Mat Operations.

During the course of the incident, the Incident Commander (along with the Support Officer) should fill out the appropriate tactical checklists and worksheets so that all applicable considerations can be made and to properly document the response efforts.

Once the incident has been stabilized, the Incident command will identify the requirements for clean-up (based on consultation with City, County, and State rules and regulations). These requirements shall be given to the responsible party and used as the basis for a clean-up plan to be completed by a licensed contractor. Such completion shall be monitored by Fire Prevention.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Decontamination	HM 012
	Rev. 04/09

INTRODUCTION

The purpose of the Decontamination Procedure is to assure that any potentially harmful or dangerous residues, on persons, equipment or apparatus are confined within the Hot Zone. Decontamination is intended to prevent the spread of contaminants beyond the already contaminated area, including the fire station, the hospital and other environments.

The specific measures required to decontaminate personnel, equipment or apparatus will vary with the contaminant, the circumstances, and the level of contamination. These factors must be considered on a case-by-case basis, within the guidelines described in this procedure.

Command is responsible for assuring that a Decontamination Group is implemented at incidents which involve a potential contamination problem. This sector or team should be assigned to personnel from the Hazardous Materials Team. Decontamination must be integrated into the management plan of the hazardous materials incident. Always consider Metro Decon units and trailers.

The Decontamination Officer is responsible for determining the most appropriate decontamination procedures and managing the decontamination process. This should be done in conjunction with advice from Research and Communications and coordinated with the Hazardous Materials Division Officer.

The initial assessment of decontamination requirements must be based upon the specific needs of the situation. The decontamination process must be appropriately designed for the specific materials involved and the degree and type of exposure encountered. The assessment will require research and may involve consultation with toxicology sources.

THE DECONTAMINATION OFFICER

The Decontamination Officer must assume that all personnel and equipment preparing to leave the Hot Zone are contaminated. Three courses of action are available:

- Confirm no contamination using instruments or investigation based on the nature of the situation.
- Decontaminate as appropriate to the situation and release.
- Retain and package items for removal from the site for disposal or decontamination at a different location.

In all cases, the primary objective must be to avoid contaminating anyone or anything beyond the

Warm Zone. When in doubt, decon all affected personnel, equipment, and apparatus.

THE DECONTAMINATION AREA

The Decontamination Area should be established within the Warm Zone perimeter adjacent to the Entrance/Exit Access Control Point. Personnel, equipment, and apparatus shall not be permitted to leave the Warm Zone without approval from the Decontamination Officer.

The Decontamination Area should provide a corridor leading away from the source of contamination toward the Exit, with stations along the way for the deposit of tools, equipment, protective clothing and other items. Monitoring personnel and equipment should be appropriately placed along the path. A person traveling along the path should experience a decreasing level of contamination along the way. When showers or spray nozzles are used, adequate space must be provided to avoid contamination of other areas or persons. The area where washing and rinsing are taking place must be diked to avoid water running into the clean area of the contamination reduction corridor.

All contaminated items must remain within the perimeter of the Warm Zone until decontaminated or safely packaged for removal. The Hazardous Materials Sector Officer or Decontamination Officer will be responsible for supervising proper removal of these items. Personnel should be assigned to inspect persons and/or equipment before being released from the Decontamination Area. This inspection may be visual or may involve the use of monitoring instruments, when appropriate. It must be assumed that items or persons are contaminated, unless their non-contamination can be confirmed.

DECONTAMINATION AREA PRECAUTIONS

During the decontamination process, all personnel working in the Decontamination Area must be adequately protected from contaminants. The Decontamination Officer will identify and require the appropriate protective equipment. These individuals and their equipment may also require decontamination after use.

Any runoff or residue from decontamination procedures must be contained within the Warm Zone and retained for proper disposal. Contaminated runoff must not be allowed to spread or escape. Diking may be necessary, and should be directed back to the Hot Zone.

PROTECTIVE EQUIPMENT PERSONAL EFFECTS

When feasible, protective clothing and personal effects should be decontaminated and released from the Warm Zone with the individual. If the Decontamination Sector Officer determines this is not feasible, these items will be impounded in the Decontamination Area. Personal effects will be carefully guarded by Decontamination Sector personnel until a determination can be made regarding their final disposition.

THE DECONTAMINATION PROCESS

The Decontamination Process shall consist of two lines. One line shall be utilized for dry decon

while the other line will be for wet decon. A dry decon line should be used when there is minimal risk of contamination to the individual or anyone else, and shall be a line that allows for clothing to be removed and replaced by clean garments. Such a process can be used for individuals indirectly effected by a chemical or biological release, and by individuals working in the Warm Zone that have not handled contaminated people or equipment. A wet decon line should always be used by response personnel working in the Hot Zone on the decon personnel who have handled them.

Decon lines should be established in steps or stages to accommodate the equipment and clothing that must be discarded. They must start at an entrance and end at an exit. As the individual being deconed proceeds toward the exit, the corridor should become cleaner. This contamination reduction corridor should also have a dirty side and a clean side. The dirty side should be used to discard anything that is potentially contaminated while the clean side is used to resupply or redress emergency responders who are returning to the Hot Zone.

SPECIAL CONSIDERATIONS

The normal wet decon process attempts to clean all protective clothing and SCBA's prior to doffing of any ensemble items. Thus, breathing protection and gloves must stay in place until the individual has passed through the wash and rinse phase of decon and is in a dry area.

If a Haz-Mat team member comes out of within contamination inside the protective garment or suit, or if the member is incapacitated, the Decon Officer will have to make a decision. The decision will be whether or not to remove all protection from the responder prior to beginning the wash and rinse phase of decontamination. If the responder is without obvious vital signs, he or she should be removed from all protective clothing, quickly deconed, and treated.
Anytime a responder or victim (of chemical or biological exposure) is incapacitated, they must be placed on a backboard prior to the decon process being started. Sometimes, it may be advisable to setup a second wet decon line to handle those who must be carried in situations of mass decon or the anticipated decon of several non-walking patients. Failure to do so will result in grid lock within the decon process. Such grid lock will overwhelm those providing decontamination and delay medical treatment of patients.

If a responder or victim can only be partially deconed or receives inadequate decontamination efforts, that person should be placed in encapsulation to protect medical personnel. In addition, the Incident Commander should anticipate the possibility of potentially contaminated individuals reaching the medical treatment area. This anticipation should be countered by providing protective clothing for all medical personnel and taking contamination reduction measures for transportation vehicles. Anytime such a possibility exists, Command should notify medical personnel in a timely manner so that they can be properly prepared.

FIRST RESPONDER DECONTAMINATION

At times, first due companies will arrive at the scene of incident and be confronted with the need to provide gross decontamination for a group of victims. Sometimes this group may be relatively small

or it may be the beginning of a mass decontamination effort. Such decontamination must be accomplished, because victims will be suffering from the effects of the exposure and/or there will be a need to reduce the potential for responders to become contaminated.

When a single company of two arrives at the scene of an incident where gross decon is required before a hazardous materials operation can be put in place, the company office will insure that all crew members are in full protective clothing with tape being applied to eliminate openings into or underneath the ensemble. If chemical protective clothing is not available, firefighter protective clothing will have to be utilized.

Tape will be used to create a corridor from the gross decon area to the holding area. Both the decon area and the holding area will also be taped. Every area that is identified with tape will be considered the warm zone. No one will enter the warm zone without the appropriate protective clothing or the highest level of clothing available.

Gross decon will be performed with water only from a standard small attack line with a firefighting nozzle. It will be performed by a firefighter standing outside of the warm zone. The individual being decontaminated will simply be "washed down" and then moved into the holding area. No clothes will be removed unless there is an ability to replace the clothing to recover the victim.

The holding area will be monitored by me or more firefighters in the full protective clothing. They will not enter the holding area unless medical treatment is required by a victim who becomes incapacitated. Once a firefighter enters the warm zone, he or she will remain until they can be properly decontaminated. Any victims that are removed from the holding area to an ambulance or to an indoor facility prior to a more comprehensive decontamination process shall remain inside the ambulance or facility until properly decontaminated. Any ambulance or facility utilized for individuals who have not been decontaminated or who have been inadequately decontaminated, shall be treated as a warm zone until properly decontaminated at the termination of a hazardous materials operation.

DECONTAMINATION SOLUTIONS

Solution A

5% Sodium bicarbonate--5% trisodium phosphate and water. Mix 2 pounds of commercial grade trisodium phosphate and 2 pounds of sodium bicarbonate with 5 gallons of water.

- Good for inorganic acids, metal processing waste, and some solvents and organic compounds such as trichloroethylene, chloroform, and toluene.

Solution B

10% calcium hypochlorite. Mix 4 pounds of calcium hypochlorite with 5 gallons of water.

- Good for heavy metals (mercury, lead, cadmium), pesticides, chlorinated phenols, dioxins, PCB's, cyanides, ammonia, and other non-acidic inorganic wastes.

Solution C

5% trisodium phosphate and water. Mix 2 pounds of trisodium phosphate with 5 gallons of water.

- Used as a general purpose rinse for some solvents and inorganic compounds, oily, greasy, non-specific waste not suspected to be contaminated with pesticides.

Solution D

Mix 1 cup of concentrated HCI into 5 gallons of water (add the acid to the water, **not** the water to the acid.) produces a dilute solution of hypochlorous acid (HCIO), Stir with a wooden or plastic instrument.

- Makes a weak acid solution good for inorganic bases, alkali and caustic wastes.

Solution E

A concentrated solution of detergent and water. Mix into a paste and scrub with a brush, rinse with water.

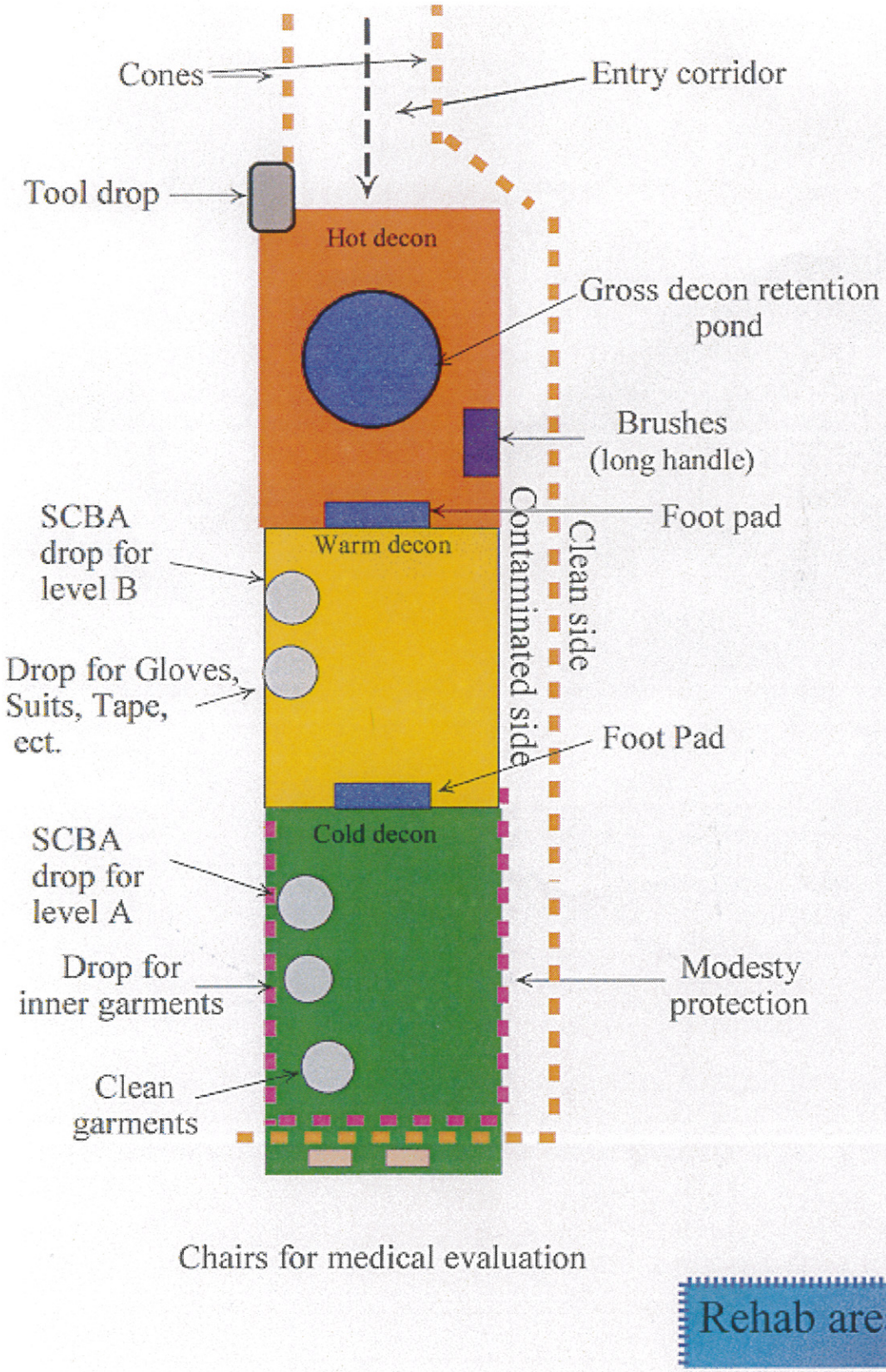
- Good for radioactive materials.

Solution F

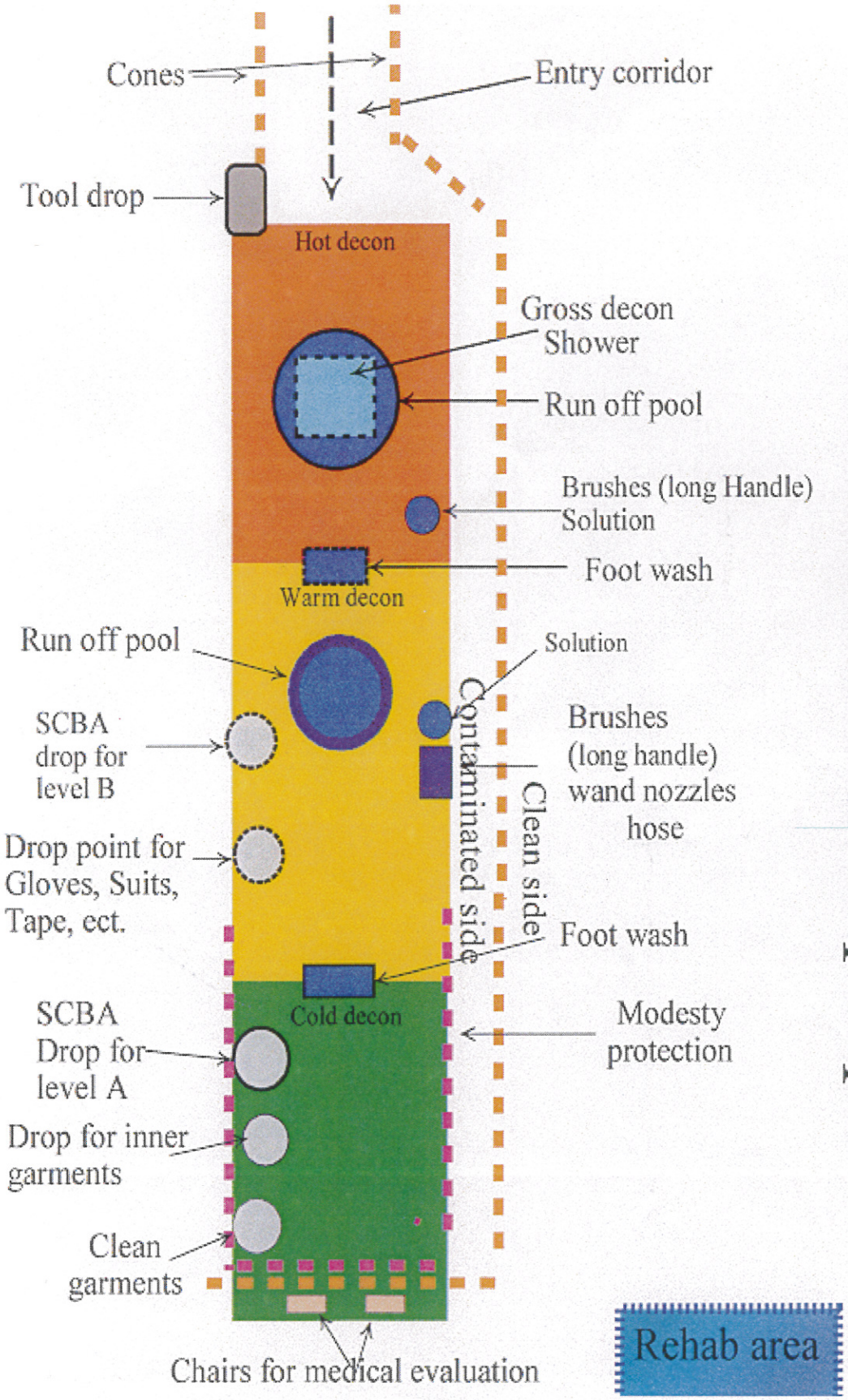
½ cup of household bleach with 5 gallons of water, or ½ cup hydrogen peroxide (3-4%) with 5 gallons of water.

- Good for etiologic materia

Dry Decon team 2 people



Wet Decon team2 people



DECONTAMINATION OVERVIEW

- Decon should obtain a briefing from the Haz-Mat Officer on the current situation and the needs for a Decon Group for the incident.
- Develop and implement a plan for Decon. Look at all equipment and resources which will be needed for the incident.
- Document and track all actions performed.
- Document and log all companies and personnel assigned to the group.
- Advise Haz-Mat of the resources and equipment required for decon to operate.
- Establish a site for the decon process to take place.
- Ensure that the proper level of protection and clothing is being used by personnel working in the Decon Group.
- Establish the corridors which personnel and equipment will take when entering and exiting the decon process. This corridor should be clearly marked.
- Identify all those personnel and equipment that is contaminated and make sure they proceed through decon.
- Provide for the safety and welfare of all personnel working in the Decon Group.
- Supervise the decon process of the incident. Make sure the decon methods used are proper for the situation at hand. Work closely with Operations and Technical Specialists in the area.
- Maintain control of decon. Make sure that no unauthorized people enter the decon corridor. Also make sure that the flow in the decon corridor is consistent with the plan.
- Maintain communications with the Safety officers on the incident. Advise them when decon is set up and ready to be utilized. Also keep track of the personnel entering the Hot Zone.
- Work closely with the Safety Officer and notify them of personnel in the hot zone and the warm zone. This will help accountability while working in potentially dangerous areas.
- Coordinate the transfer of patients from decon to the Medical Treatment area. Advise Command, Haz-Mat, and Medical personnel of potential contamination and what decon has been completed on responders, equipment, tools, and patients.
- Ensure that all contaminated material and runoff is contained and secured in decon. Work with Haz-Mat to properly dispose of all contaminated items during and after the incident.
- Constantly advise Command of the progress and needs of the decon process.
- Maintain checklists, and worksheets on all aspects of the decon process.

WEST VALLEY CITY FIRE DEPARTMENT

Hazardous Materials Decontamination Worksheet

ENTRY TEAM	BACK UP TEAM	RADIO CH(S)

Decontamination Team Accountability

NAME	PC	ON AIR TIME	OFF AIR TIME

Protective Clothing (PC): (TO) Turnouts, (DOTO) Disposable over Turnouts.
A) Level A, B) Level B, C) Level C, D) Level D, P) Proximity.

DECON SOLUTIONS	EQUIPMENT NEEDS

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Division Supervisor	HM 006
	Rev. 02/09

This officer may be a Company Officer or Chief Officer. They may be in command of a branch, division, or group. This officer is responsible for planning, organizing and conducting excursions into a hot zone for the purpose of mitigating a hazardous materials release.

HAZARDOUS MATERIALS DIVISION SUPERVISOR

This officer, assigned by Command to manage or supervise the Hazardous Materials Team members, must direct and coordinate all personnel and activities within the confines of the warm and hot zones. The primary responsibilities of this officer are:

- Planning (with Command and inside the Branch, Division, or Group)
- Establish the appropriate organization units or teams.
  a) Site Control
  b) Research
  c) Communications
  d) Support
  e) Entry
  f) Back-up
  g) Safety
  h) Decon
  i) Medical
  j) Clean-up
- Designate positions
- Give assignments
- Monitor progress
- Coordinate activities
- Communicate with Command and Haz-Mat personnel
- Adjust plan, position, assignments, and resources as necessary
- Terminate operation

DIRECTION/COORDINATION/COMMUNICATION

When the Haz-Mat officer establishes each position to conduct the hazardous materials operation, he or she must consider the span of control at large or complex incidents. If the span is too great, this should lead to the creation of a branch or the separation of Decontamination and Medical from Haz-Mat by making them separate divisions or groups.

A hazardous materials operation potentially requires a large number of qualified technicians. If the required number of qualified emergency response personnel is not available, the Haz-Mat Officer must cause available trained personnel to take on more than one role or position or to change roles or positions as the incident progresses. At times, it may also be necessary to place an officer or a team member with those who are not adequately trained or have the necessary experience. In these situations, all personnel working with the Haz-Mat team must be closely supervised.

For any working hazardous materials incident, the Hazardous Materials Officer must properly designate all areas of activity as well as the required supervisor before the Haz-Mat plan is implemented. Thus, all elements must be in place prior to actions being taken. This includes briefing all officers and team members so that they understand the objectives to be obtained and the tasks to be performed.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Entry/Back up Team	HM 011
	Rev. 4/09

RESPONSIBILITIES

The Haz-Mat Entry and Back-up Teams are intended to work in the Hot Zone for the purpose of performing reconnaissance, response, monitoring, sampling, and spill mitigation. In order to successfully complete one or more of these assignments or tasks, the Entry and Back-up Teams must be properly prepared to operate in the Hot Zone, closely supervised by experienced officers and tightly supported by other teams or groups within the operation itself. Practical action plans accompanied by strong branch or division wide communications are key elements to the successful mitigation of significant chemical release.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment includes fire protective clothing and/or chemical protective clothing along with necessary respiratory protection to eliminate or reduce any potential danger. The Entry and Back-up Teams should have the following types of protective clothing available for use:

- Firefighting turnout coats, boots, and helmets
- Fire resistant gloves and hoods
- Disposable splash protection garments
- Disposable, fully encapsulated, vapor type chemical protective clothing with chemically resistant boots and gloves
- Non-chemical resistant gloves
- Chemical resistant gloves
- Hard hats with face shields
- Chemical resistant boot covers
- Cool vests at 70 degrees F or higher

At oil spills where there is no danger of fire, (based on air monitoring results), entry and back-up team members shall wear a disposable coverall, under gloves and over gloves, and oil-resistant boots or boot covers. No member may participate in spill mitigation activities in station uniforms or street clothing. Any cotton, leather, or other absorbable material that is utilized at such calls shall be discarded after use.

At incidents where there is an actual or potential threat from fire or explosion full firefighting protective clothing or turnout gear must be worn within the Hot Zone to include:

- Bunker pants, coats, boots
- Firefighting helmet with face shield
- Firefighting gloves and hood
- SCBA with face-piece in place

At incidents where there is an actual or potential threat from chemical exposure, chemically resistant clothing must be worn within the Hot Zone to include:

- Flame resistant coveralls
- Chemically resistive garments with hoods
- Chemically resistive boots and/or boot covers
- Chemically resistive gloves

When gloving, an inner glove shall be worn and a gauntlet glove may be worn over outer gloves to provide additional hand protection. At incidents where there is an actual or potential threat from chemical exposure and fire, chemically resistant clothing with firefighting turnout gear shall be worn within the Hot Zone. The chemically protective clothing may be splash protection, vapor tight, depending on the nature of the hazard. At incidents where the risk of chemical exposure is extreme, a fully encapsulated vapor tight protective clothing ensemble shall be worn within the Hot Zone to include:

- Flame resistant coveralls
- Chemically resistant, vapor tight protective garment that includes chemically resistant outer gloves and boots
- Head protection if applicable
- Gauntlet gloves may be worn over outer gloves to provide additional hand protection

There is an exception to this guideline: The protective clothing for the back-up team is usually identical to that of the entry team. If the probability for rescuing the entry team would involve a fire fight, it may be more practical to have the back-up team in firefighter turnouts without chemical protective clothing. Such a decision must be based on the ability of a fire to change the potential chemical exposure for the back-up team or the unlikely possibility of chemical exposure.

RESPIRATORY PROTECTION

The Entry Team and Back-up Team leaders in consultation with the Hazardous Materials Team Leader (i.e. the Hazardous Materials Branch or Division Supervisor) shall determine the type of respiratory protection required within the Hot Zone.

Self-contained breathing apparatus is the required respiratory protection at incidents involving fire and explosion, where there are high concentrations of known hazardous materials or to unknown or uncharacterized materials, at incidents where oxygen concentration is less than 19.5%, and at incidents where there is a real or potential threat of low level radioactivity.
Air purifying full-faced respirators (APRs) can be utilized in the Hot Zone or Warm Zone where there are low concentrations of known materials that can be quantified based on the type of instrumentation available. APRs can only be utilized when the concentration present does not exceed the capacity of the cartridge, and the cartridge is approved for the chemical hazards present. Such cartridges should not be used when the oxygen concentration is below 19.5%, or the concentration present exceeds 50 times the TVL or PEL, or the concentration is at or above the IDLH.

GETTING ORGANIZED

As the Haz-Mat Branch or Division Supervisor is developing an action plan, he or she will conduct a meeting with all team leaders to discuss and refine the plan. When the officer in charge meets with the Entry and Back-up Team Leaders, he or she should have all necessary information from the Research Team so that these questions can be answered:

- What is the purpose of the entry into the Hot Zone (recon, sampling, mitigation, etc.)?
- What PPE is to be worn by both teams?
- What communications equipment and channel(s) are to be used?
- What monitoring equipment is to be utilized?
- What equipment, tools, and materials are needed for the excursion?
- What tasks are to be completed by the Entry Team?
- How many Entry Team members will be needed (the Back-up Team must provide one on one rescue ability)?
- How is the back-up team to be deployed?

Once the Action Plan has been drafted for the specific entry into the Hot Zone, the Entry Team and the Back-up Team should be sent to their designated area to be briefed by their team leaders. Each team should utilize a supervisor who will direct work or actions as opposed to carrying them out. As the teams are being briefed, the Equipment Officer and Equipment Team should bring all required protective clothing and communications equipment to the dressing area. All monitoring equipment, other equipment and tools, and spill control materials shall be delivered to the entrance of the Warm Zone. Personnel should be assigned to the Entry and Back-up Teams to help them dress. They should be supervised by the Equipment Officer and checked by the Safety Officer.

MEDICAL EVALUATION

Prior to dressing Entry or Back-up Team members, each person entering the Hot Zone shall be evaluated by a member from the medical team. This evaluation required vital signs as well as questions to be answered and shall be documented by a form to be filled out on each member. Any abnormal vital signs or negative answers to medical questions shall eliminate ant team member from dressing and entering the Hot Zone. Medical personnel will also provide Entry and Back-up Team personnel with information about the toxic hazards of chemicals that they might be exposed to. Such information shall describe potential signs and symptoms from exposures as early warning signs of protective clothing or equipment failure.

BRIEFINGS

The team supervisors shall brief the Entry or Back-up Teams respectively as in the roles and tasks to be completed for each specific entry made into the Hot Zone. As instructions are being given concerning the details of the initial or draft action plan, team members are encouraged to offer suggestions to improve the plan. Any suggested changes are then given to the Haz-Mat officer in charge for appropriate modifications. During such briefings, each individual team member shall be given assignments that compliment the team efforts inside the Hot Zone.

COMMUNICATIONS

Once the Entry and Back-up Teams have been medically evaluated, briefed, properly dressed, and all equipment and materials put in place, the officer in charge will do a radio check on the assigned channel. After he or she has insured that radio communications with both the Entry and Back-up Team supervisors in tact, the officer in charge should also insure that Site Control, Decontamination, Medical and Safety are also in place, ready to go, and on the appropriate radio channel. After this radio check has been completed, the Haz-Mat officer in charge will notify Command that entry into the Hot Zone is going to proceed.

SAFETY OFFICER

The Safety Officer has several duties related to the Entry and Back-up Teams operating in the Hot Zone. First, he or she is to oversee the medical evaluation and documentation. The Safety Officer will have the final say on who can and cannot work in the Hot Zone. The Safety Officer will also observe the dressing procedure and will check each team member to provide quality control for this important process. During the briefings in which assignments are given to Entry and Back-up Teams, the Safety Officer shall also provide instruction as to the safety practices that he or she wants to be employed in the Hot Zone. There shall be no deviation from the Action Plan or from those safety instructions without the permission of the officer in charge and the Safety Officer. As the Entry and Back-up Teams move into position, the Safety Officer shall also check the Access Control Point to make sure that all personnel entering the Warm Zone are being accounted for. He or she will also monitor all communications in the Warm and Hot Zones in order to alert the officer in charge of any safety concerns. Along with, and in connection with the officer in charge, the Safety Officer has the authority to stop the operation in the Hot Zone and to cause all members to leave the area.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Hazardous Materials Division	HM 004
	Rev. 1/09

The Hazardous Materials Division is a functional division, which may need to be supported by geographical or other functional divisions. In conjunction with the Incident Commander, the plan and objectives will be put together for the Hazardous Materials Division. Some pre-determined objectives for a Haz-Mat division are:

- Monitor zones
- Rescue victims (remove bodies or mark bodies)
- Stabilize chemical reactions
- Stop leaks and control spills
- Decontaminate people and equipment
- Treat patients
- Supervise cleanup and disposal of hazardous waste (by a qualified contractor)

RESPONSE

During response and based on information from dispatch or the field, Haz-Mat team members will begin the research process. This process will begin the search for chemical information and the review of any available pre-plan or target hazard information on the facility where the chemical accident has occurred. If possible, the Haz-Mat team should acquire a weather report prior to arrival at the incident. Such a report should be compared to actual arrival conditions at the scene. Response of Metro Haz-Mat Teams should be considered.

ARRIVAL

Upon arrival, the Haz-Mat team officer should stage all Haz-Mat apparatus based on all standard operating guidelines. This officer should then report to the Incident Commander to be briefed and to receive directions from the Incident Commander. The briefing (and discussion) should include, but not be limited to, the following factors:

- Nature of accidental spill or release
- Rescue or recovery profile
- Potential for more exposure to employees, responders, and citizens
- Need for further evacuations
- Need for establishing or changing security zones
- Resources at the scene or on the way
- Actions taken by the Incident Commander
- Objectives and tasks for the Haz-Mat team
- Designation of the Haz-Mat Division Supervisor

INITIAL PLANNING AND ORGANIZATION

After leaving the command post, the Haz-Mat Division/Group Officer (as determined by the IC) will proceed to direct the team to the area from which they will establish and operate the Hazardous Materials Division. If this division is to operate within or in conjunction with other divisions, the Haz-Mat division supervisor will communicate and coordinate with these divisions.

Upon arriving in the appropriate area, the Haz-Mat Division Supervisor in conjunction with other team members will formulate an action plan for the division. This plan will address any objectives and tasks that are needed to mitigate the chemical impact of the release or spill.

The Hazardous Materials Division has many areas of activity that need to become part of the organizational approach to the event in order to accomplish identified objectives. Such areas of activity would include:

- Site control (via established zones and security)
- Research (chemicals, processes, facilities, neighboring occupancies)
- Communications (inside/outside the sector)
- Support (protective clothing, monitoring devices, equipment tools, and spill control materials)
- Entry Team
- Back-up Team
- Safety
- Decontamination Team
- Medical Team
- Cleanup and disposal
- Documentation (Site safety plan and incident action plan)

If the incident is large enough, the Hazardous Materials Division should become a branch. At times it is more practical to operate certain activities (i.e., decon and medical) as divisions within the Haz-Mat branch.

After the action plan and organization have been developed for the Haz-Mat team, the Division Supervisor should take the plan to the Incident Commander for approval. It is critical that the Haz-Mat plan fit with the overall plan for the incident. The Haz-Mat group or team should never operate isolated or removed from the rest of the operation. At times it may be necessary for Command to appoint a Liaison Officer for the Hazardous Materials Division. This individual will facilitate communications between Command and the Hazardous Materials Division supervisor. This allows Command to keep abreast of changes within the division so plans can be adjusted and resources properly deployed.

No part of the Haz-Mat action plan should be implemented until all areas of activity are established and ready to proceed. This includes being able to communicate with each other. It is the responsibility of the Haz-Mat division supervisor to coordinate all division activities, and all activities must be monitored by the Safety Officer.

MANAGING THE DIVISION

Site Control Team:
The Site Control Team has the responsibility to establish or re-establish zones based on monitoring the affected area. They are also responsible to establish access points and lobby control for the division. All monitoring must be done in full protective (or chemical) clothing.

Research Team:
The Research Team is responsible for evaluating research material about the chemicals that have created a potentially dangerous situation. A good research effort produces good information and eliminates costly mistakes in judgment or decision making. Such research must have a check and balance system that causes each chemical to undergo cross-referencing so that contradictory data can be identified. As the research identifies the hazardous characteristics of specific chemicals, recommendations can be made as to the protective clothing, monitoring equipment, tools, spill control materials, stabilization methods, and decontamination procedures case is made.

Communications Team:
The Communications Team is responsible for accessing data bases, chemical and toxicology consultants, and outside agencies or private companies. It is also responsible for facilitating communications within the team and with Command.

Support Team:
The Support Team has two basic functions. One function is to provide the current protective clothing and communications equipment for the entry and backup teams. The other function is to provide monitoring devices and any equipment or tools that might be needed for testing, neutralizing, or controlling the spill or leak.

Entry Team and Back-up Team:
The Entry and Back-up Team includes those that will directly work in the Hot Zone or chemical environment plus a back-up team for rescue. All team members that enter of may enter the Hot Zone must be medically evaluated and properly dressed prior to entering potentially hostile surroundings. Entry and Back-up teams should give constant progress reports while in the Hot Zone and will be monitored by lobby control and the Division Safety Officer. If the Entry Team is utilizing an action plan that becomes dysfunctional, they should leave the area, and the plan should be revised. Good communications between the Entry and Back-up team and the Division Supervisor are critical.

Decontamination Team:
The Decontamination Team must be ready to perform decontamination prior to the entry team being allowed to enter a hazardous area. This team should always be in a state of readiness once they have set-up in the Warm Zone. All personnel, patients, and equipment must be decontaminated prior to leaving the Warm Zone. Any equipment or materials that cannot be decontaminated must be left in the Warm Zone to be disposed of as hazardous waste. Any patients who cannot be decontaminated must be packaged so as to contain any contaminated items.

Upon leaving the Warm Zone, personnel should either proceed to the rehab or medical area. The medical treatment area should be manned by paramedics (preferably by those with toxicology training). As patients enter the treatment area, they should be segregated in terms of the seriousness

of their condition. Should any patient pose a contamination threat, all extrication and transportation personnel must be in protective clothing, and hospitals must be notified that they are receiving contaminated patients.

Documentation Team:
This team will be responsible for completing a site safety plan and an incident action plan. They will also be responsible for documenting times the entry teams are on air, entering and exiting the hot zone, and time off air. Post operations, the documentation team will account for all equipment used and submit to administration an itemized list for billing purposes and cost recovery.

SUMMARY

After the emergency has been eliminated, it is the responsibility of Command and the Haz-Mat team to make arrangements for the clean-up, removal, and proper disposal of hazardous waste. The clean-up and disposal of hazardous waste should be undertaken by a reputable, licensed contractor. This reduces exposure potential for responders and reduces the legal liability for the responsible party and the response agencies.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Officers and Team Leaders	HM 005
	Rev. 02/09

This SOG is a companion guideline to The Hazardous Materials Division (which identifies the operating guidelines for managing a hazardous materials branch, division or group). The intent of this SOG is to describe the responsibilities of each officer or team member who may be assigned to a key group or team at a hazardous materials incident.

HAZARDOUS MATERIALS DIVISION SUPERVISOR

The officer assigned to manage or supervise the Hazardous Materials Branch or Division must direct and coordinate all personnel and activities for the group. The primary responsibilities for this officer are:

- Planning (with Command and inside the branch or division)
- Establishing the appropriate divisions, groups, or teams;
  a) Site Control
  b) Research / Communications
  c) Equipment Support
  d) Entry / Back-up
  e) Decon
  f) Medical
  g) Rehab
  h) Clean-up
- Designating positions and giving assignments
- Monitoring progress
- Coordinating activities
- Communicating with Command and Haz-Mat personnel
- Make necessary adjustments to the plan, assignments, and resources.
- Terminate Division or Branch

SAFETY OFFICER

The Safety Officer is Responsible for the following measures:

- Develop and implement site specific safety plan Haz-Mat operation.
- Insure that all required divisions or groups are in place and functioning prior to start of the operation.
- Monitor all communications within Branch, Division, or Group.
- Insure all personnel entering the Hot Zone have been medically evaluated and properly dressed.
- Make sure that assignments and instructions for personnel entering the Hot Zone or working

in the Warm Zone include safety considerations.

- Record on-air times for all personnel in chemical protective clothing.
- Stop or change any unsafe actions.
- Assist the Division Supervisor with accountability.

LIAISON OFFICER

The Haz-Mat Liaison Officer will be utilized by Command to facilitate communications with the Hazardous Materials Branch, Division or Group. This position should be created when the hazardous materials operation is complex and/or very hazardous. Since the Haz-Mat Officer may be very involved, such a Liaison Officer will provide another communications link with Command that can maintain the flow of information in a timely and efficient manner. This Liaison position may also be used to work directly with outside agencies or individuals with technical experience who need to interact with Haz-Mat personnel.

SITE CONTROL OFFICER

The Site Control Officer is responsible for establishing or re-establishing zones. If zones have already been set up, they may have to be adjusted based upon a better understanding of the relative hazards. If zones have not been set up, they must be put in place. Whenever monitoring equipment or methods can be used to establish zones, such action should be taken. The Site Control Officer is responsible for monitoring and controlling all access points into and out of the Warm Zone and the Hot Zone. No one should be allowed into the Warm Zone without the proper level of protective clothing and an assignment. The Site Control Officer must insure that contaminants do not leave the Warm Zone.

RESEARCH/COMMUNICATIONS OFFICER

The Haz-Mat Research/ Communications Officer and his or her team are responsible for gathering, compiling, coordinating and disseminating all data and information relative to the incident. This data and information will be used within the Haz-Mat branch, division or group for evaluating risks, developing a plan, selecting protective clothing and determining control methods. When providing research support for the Haz-Mat team, the Research Officer will insure that:

- Each chemical is evaluated based on set criteria.
- That more than one reference is used for each individual chemical.
- That the worst case scenario is used when there are contradictions in the information.

The Research and communications functions must be put together to provide the necessary information to all concerned. It is the role of the communications function to disseminate all chemical and chemical process information to the Haz-mat Division Supervisor and Command. Members of the Research/Communications Team or Group may also be involved in providing updates to that information. Finally, the Communications Officer serves as the contact point between other response teams, private industry representatives, environmental agencies and medical advisors.

EQUIPMENT SUPPORT OFFICER

This officer provides for the logistical support of the Haz-Mat Team in the field. This officer or team leader supplies entry and back-up team members with protective clothing, communications equipment, monitoring devices, tools, and spill control materials. This logistical effort also applies to the decon and medical teams in terms of protective clothing, hazardous materials equipment and tools.

ENTRY AND BACK-UP TEAM OFFICER

The Entry Team Officer is the Hot Zone supervisor who directly controls the activities of team members in potentially dangerous situations. As such, this officer is responsible for all offensive and defensive actions to control and mitigate the actual or potential chemical release. This officer must coordinate operations between entry, back-up, medical and decon. He or she may also direct rescue operations within the Hot Zone. In case of an emergency, the task of the Back-up Team is to extract the Entry Team from the Hot Zone. The Back-up Team must be in place when the Entry Team Proceeds into the Hot Zone and will respond to any accident based upon orders from the Haz-Mat Group Officer.

DECONTAMINATION OFFICER

The Decon Officer and Team are responsible for applying decontamination methods to remove all the contaminants prior to anyone or anything leaving the Warm Zone. The Decon Officer is responsible for:

- Determining the proper level of decontamination to be provided.
- Ensure that proper protective clothing is being worn by decon methods.
- Ensure that proper decon procedures are being use by the Decon Team.
- Coordinate decon efforts with the Entry Team Officer and the Medical Officer. The Decon area must be established before anyone enters the Hot Zone.
- Control all personnel entering and leaving the Decon Area.

MEDICAL OFFICER

The Medical Officer and personnel assigned to this group are responsible to monitor all Entry Team and Back-up Team personnel before and after mitigating the hazardous materials release. The Medical Group or Team (like decon) must be in place prior to entry into the Hot Zone. The Medical Officer is responsible for treating the ill, injured, or chemically contaminated civilians or emergency response personnel.

CONCLUSIONS

A hazardous materials operation at the Branch, Division, or Group level requires a large number of qualified emergency response personnel. If the required number of qualified personnel is not available, Haz-Mat Officers and Team members may have to take on more than one role or position or may have to change roles or positions as the incident progresses. At times, it may be necessary to

place a qualified team member or officer with those that are less trained to oversee their activities in support efforts to sustain the activities of the Haz-Mat part of the overall operation. It is extremely important that the Haz-Mat Division Officer properly designate all the required areas of activity and all required supervisors before the Haz-Mat plan is implemented. All officers and team members must be properly informed as to the objectives and tasks they are required to carry out.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Research	HM 009
	Rev. 4/09

SCOPE

The Haz-Mat Research Team is responsible for gathering, compiling, coordinating, and disseminating all data and information relative to the incident. This data and information will be used within the Haz-Mat Branch, Division, or Group for evaluating risks and developing or adjusting the Incident Action Plan (IAP), including; adjusting Isolation Zones, selecting protective clothing (PPE), determining spill control methods, implementing the decon process, and identifying medical treatment options.

METHODS

The Research Team should use multiple sources to cross-reference and verify information whenever possible. Sources should include; both department and on-line data bases, on- and /or off-site technical advisors and industry representatives, medical experts, private contractors (clean up and disposal, etc.) and other governmental agencies (fire and police departments, FBI, EPA, military, national weather service, et. al.) Information from varying sources does not always agree precisely, and is occasionally contradictory. The Research Team should reconcile small discrepancies favoring the safest and most logical options. Serious or irreconcilable discrepancies should be presented to the Haz-Mat Branch Director for evaluation.

Complex incidents and incidents where life-safety concerns cause "a need to act" put time constraints on the research process. At these times, a rough picture of the hazards involved as well as the necessary PPE and decon processes should be outlined in a timely manner, even as research continues.

TEAM MEMBERS

The Research Team's size will be based on the size and the complexity of the incident as well as the available resources, but should include the Research Officer and the Medical Officer for the Haz-Mat Branch.

RESPONSIBILITIES

The Research Team should take part in the development of the IAP and be prepared to brief Site Control, Decon, Entry Teams, RIT, Medical, Haz-Mat Medical and other Groups with detailed information pertinent to their specific assignments.

The responsibilities of the Research Officer and Team members include:

- Acquire all preliminary information for each product (and processes) identified as involved with the incident and fill out the "Chemical Reference Worksheet" for each product researched.
- Identify the primary hazards of the products (and processes) involved and submit to the Haz-Mat Officer in charge.
- Where leaks are likely to contaminate other material, identify possible affects from their interaction.
- Acquire current weather forecasts and frequently update.
- Acquire building layouts and/or topographical information.
- Make predictions regarding the behavior of the spill or leak based on the physical properties of the product(s) and their interaction with the environment.
- Identify medical concerns, including a timeline for the signs and symptoms of exposure.
- Make recommendations to the Haz-Mat Officer in charge for the following:
  a) Evacuation distances
  b) Size and location of Isolation Zones
  c) Proper levels and types of PPE for all zones
  d) Spill control methods, equipment, tools, and materials
  e) Decon methods
  f) Medical treatment options for exposure to the product(s)
- Assist with the development of the IAP
- Provide detailed, mission specific briefings to the various personnel as directed by the Haz-Mat Officer.
- Act as liaison with the various entities providing research information.
- Maintain all documentation required of the Research Team.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Safety Officer	HM 007
	Rev. 02/09

SCOPE

The Hazardous Materials Safety Officer is in reality the Support Officer for the Hazardous Materials Officer. Any working hazardous materials incident should have a Safety Officer for the incident and a Safety Officer assigned to the Hazardous Materials Branch, Division, or Group. This officer will assist the officer in charge with all safety considerations during the course of the operation.

RESPONSIBILITIES

The Hazardous Materials Safety Officer is responsible for the following measures:

- Develop and implement a site safety plan for the Haz-Mat operation.
- Insure that all required divisions/groups, and personnel are in place and functioning prior to the start of the operation.
- Monitor all communications within the warm and hot zones.
- Insure that all personnel entering the hot zone have been medically evaluated and properly dressed.
- Make sure that assignments and instructions for personnel entering the hot zone or working in the warm zone include safety considerations.
- Record and monitor on-air times for all personnel in chemical protective clothing.
- Stop or change any unsafe act.
- Assist with accountability of all personnel assigned to the Haz-Mat operation.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response Special Considerations for First Responders	HM 002
	Rev. 12/08

GENERAL FACTORS TO CONSIDER

Due to the wide variety of situations fire department personnel may encounter in dealing with hazardous materials, these considerations will not attempt to provide specific guidelines on any one individual chemical or situation and are not listed in any priority.

It is important that the first arriving fire department company make every effort to determine what hazardous material(s) is involved, and the amount prior to taking action to stabilize the incident.

Call for additional resources early. The actions taken by Command in the first few minutes of the incident affects the outcome more than any other single factor. Hazardous Materials teams will be needed as well as a number of other fire companies to support site operations. Make a slow, cautious approach to the incident. Entering the scene to make positive identification may be a considerable risk. The danger of explosion, leaking gas and poisoning may be great. Furthermore, any "Knee-jerk" action taken prior to determining the product involved may place firefighters at a considerable safety risk and may further compound the problem.

Transportation emergencies are often more difficult than those at fixed locations. The materials involved may be unknown, warning signs may not be visible or obscured by smoke and debris, the driver may be killed or missing. DOT hazardous materials marking systems are inadequate because some hazardous materials in quantities up to 1,000 lbs., do not require a placard and there may be combinations of products involved with only a "dangerous" label showing. Sometimes only the most evident hazard is identified, while additional hazards are not labeled.

The following items should be considered at any hazardous materials incident. (Not all will be significant at any particular incident.)

- Cooling Containers - Flame Impingement
  a. Obtain adequate water supply, use large GPM hose streams or stung guns.
  b. Apply heavy streams to the vapor space area above the tanks liquid line.
  c. Use unmanned streams.
  d. Use natural barriers to protect personnel.
- Remove Uninvolved Materials
  a. These actions should only be done after a complete site safety plan has been established by Command and the H.I.R.T. Officers.
  b. Move individual containers.
  c. Move tank cars away from flame.
  d. Cool containers before moving.

- Stop the Leak
  a. Use water spray to approach leak.
  b. Close valves when safe to do so.
  c. Do not apply water to chlorine containers - it will make the leak worse.
- Apply Diluting Spray or Neutralizing Agent
  a. Dilute water-soluble liquids, such as ammonia, chlorine, LPG (No water on CL2 tanks).
  b. Use water with caution on some materials.
- Construct Dams, Dikes or Channels
  a. Direct running liquid away from exposures.
  b. Control run off from corrosive or toxic materials.
  c. Use sand or dirt.
  d. Keep product out of sewers, storm systems, canals, or other waterways, etc.
- Remove Ignition Sources
  a. Start down wind.
  b. Eliminate all sources of heat, spark, and friction.
  c. These actions may need to be accomplished in conjunction with the proper technical advice.

Dispatch has a Reference List of personnel and organizations which may be helpful during Hazardous Materials Emergency. These include:

- Fire department personnel with particular experience or knowledge.
- Authorities in charge of landfills and dumps where Hazardous Materials may be disposed.
- Commercial chemical experts with experience in handling and disposing of most common chemicals.
- Pesticide consultants and disposal teams with equipment to clean up agricultural chemical spills.
- Personnel from state and federal regulatory agencies. These personnel should be contacted for incidents involving transportation of Hazardous Materials.
- Railroad information numbers.
- Tank truck companies with de-fueling capability (in case carrier involved in incident has none).
- Radioactivity and military weapons emergency contacts.

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Hazardous Materials Response/Haz-Mat Medical Group	HM 016
	Rev. 6/09

SCOPE

The Haz-Mat Medical Group is responsible for monitoring the medical condition of personnel assigned to the Haz-Mat Branch and providing treatment as needed. Additionally, the group serves as the on-site resource for medical information regarding exposure to the release. As part of their mission, Haz-Mat Medical Group member(s) should be attached to the Research Group to identify medical concerns associated with the hazardous materials release and to assist in the creation of the Incident Action Plan (IAP).

TEAM MEMBERS

The Haz-Mat Medical Group will be led by the Haz-Mat Medical Officer. Additional personnel should be assigned to the group based on the scale of the incident. Assignments could include; Medical Research, Medical Monitoring (of Hot Zone entrants), Haz-Mat Medical Treatment, Haz-Mat Medical Transport, etc.

The Haz-Mat Medical Officer should request the personnel and equipment necessary and create an organizational structure to meet the responsibilities of the Haz-Mat Medical Group.

RESPONSIBILITIES

The responsibilities of the group include:

- Identify the signs and symptoms of exposure (at various levels) to the released product(s), including short and long term complications.
- Identify emergency and long term treatment options for victims of exposure.
- Create Emergency Treatment Plans for treating victims exposed to product.
- Identify other health concerns for responders at the incident. (i.e. cold, dehydration, ice, etc).
- Identify equipment and PPE levels for medical personnel who are treating exposed victims and responders who may not have been through the full decon process prior to treatment.
- Manage and prepare (i.e. "drape") dedicated ambulance(s) and crew(s) for exposed or injured responders who may not have been through the full decon process.
- Assist with the preparation of the IAP.
- Treat and transport exposed or injured response personnel.
- Establish Medical Clearance for entry team members (e.g. acceptable vitals range, unacceptable medications or medical history, etc.) with consideration for environmental conditions and the level of work expected.
- Medically clear entry team members prior to entry.

- Brief Medical Branch, Site Control, Decon, Entry Teams, Rit, Haz-Mat Safety Officer, and other groups, with detailed medical information pertinent to their specific missions (i.e. signs and symptoms of exposure, short and long term complications of exposure, emergency treatment protocols, etc.).
- Monitor the medical condition of entry personnel prior to, during, and immediately after entry into the Hot Zone.
- Contact and brief receiving hospital ER or ED regarding the product, complications of exposure, and decon status of patients.
- Serve as Liaison for all off-site medical experts on the treatment of exposed victims.
- Maintain documentation on emergency personnel and patients.
- Follow up with all exposed West Valley City employees and the designated department Exposure Officer.

Incident Management

300.1 PURPOSE AND SCOPE

The purpose of this policy is to establish operational guidelines for members of the Department to use in the management and mitigation of all-hazards emergency incidents.

300.1.1 DEFINITIONS

Definitions related to this policy include:

All-hazards - An incident, natural or manmade, that warrants action to protect life, property, the environment, and public health or safety, and to minimize disruptions of government, social or economic activities.

300.2 POLICY

It is the policy of the West Valley City Fire Department to utilize the Incident Command System (ICS) or other National Incident Management System (NIMS)-compliant incident management system for managing all emergency incidents. All incident-related activities should be managed in accordance with established ICS/NIMS methods and procedures.

300.3 INCIDENT MANAGEMENT

The Administration Battalion Chief should ensure the Department adopts written ICS/NIMS procedures that are compatible with neighboring jurisdictions. These procedures should be available to members.

Emergency incidents shall be managed utilizing trained and qualified personnel for the specific tactical, supervisory or command level assignments.

Basic Incident Command Procedures

Hazardous Materials Response Command Considerations

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WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Anthrax Tactical Response Plan	HM 018
	Rev.4/09

DESCRIPTION OF AGENT

Anthrax is a highly lethal infection with the bacterium, Bacallus anthracis.

METHOD OF CONTAMINATION

- Cutaneous or skin form, occurs most frequently in hands and forearms, typically by a person working with infected animals or directly exposed to the agent
- Inhalation of the spores, this method would be deliberate. Aerosolized particulate
- Ingestion of insufficiently cooked meat of an infected animal

INCUBATION PERIOD

1-6 days

SIGNS AND SYMPTOMS

Fever, malaise, fatigue, cough, and mind chest discomfort are followed by severe respiratory distress with dyspnea, diaphoresis, strider and cyanosis. Shock and death occur 24-36 hours after the onset of severe symptoms (usually after the respiratory distress onset). In cutaneous anthrax a papule develops, then vesticates, finally developing into a black eschar surrounded by moderate to severe edema. The lesions are usually painless. Without treatment, the disease may progress to septicemia and death with a case fatality rate of 20%. With treatment, fatalities are rare.

TREATMENT

The treatment of anthrax will be completed at a medical facility. Very little can be done with the initial treatment in the field. The field units will need to treat the symptoms as to the normal protocols for the symptom which is present. Medical personnel should where the proper level of protection which is normally used for patient contact. Clinical treatment: High-dose penicillin, ciprofloxacin, or doxycycline should be given. This is not contagious from person to person.

BASIC HAZARDOUS MATERIALS RESPONSE AWARENESS

- Isolate the area and any involved people
- Deny access to anyone except response personnel

- Determine the routes of exposure of the material
- Develop a response plan which includes; level of protection for responders, ability to decontaminate, and medical plans
- Keep everyone calm...

UNIT RESPONSE

- Battalion Chief
- Engine Company
- Haz-Mat Unit
- Police Unit

RESPONSE

Unopened letters or packages with no suspicious markings or indicators:

- This assessment shows that no action by the police or fire department is required. The person who received the letter should be advised that if they are concerned about opening the item they should not do so. It is their right to simply throw the letter away.

Opened letters or packages that contain neither threatening correspondence nor material:

- No response from the fire or police departments is necessary.

Opened letters or packages with material which has spilled out:

- A joint response from both the fire and the police departments will be necessary.
- The room where the package is located should be isolated.
- Complete a hazard and threat assessment to try and determine what is in the package; call or track down where the mail was sent and what it may contain.
- Responders must collect the evidence and send for testing.
- All materials must be screened for chemical and radiological gear for an unknown product. Minimum: splash, gloves, taped respiratory protection with SCBA or filter masks, and eye protection.
- Secure evidence for testing.
- Decontaminate if necessary.
- Notify the State Department of Health
- Notify the FBI

Unopened sealed letters or packages with suspicious markings or indicators:

- Complete a hazard assessment and threat assessment for package
- Radiological monitor
- Explosive device; x-ray package
- Chemical screen
- Operation completed in appropriate level of personnel protective equipment
- Decontaminate if necessary
- Notify the State Department of Health

- Notify the FBI
- Make working Haz-Mat notifications

DECONTAMINATION

People involved in the material, including responders:

- Remove clothing
- Wash with soap and water and place person in white tyvek
- Bag all clothing and material in a bag which is marked with contents, and biohazard

For Objects:

- Do not vacuum the object
- Spray the area with 1:10 solution of household bleach, leave it for five to ten minutes and wipe off

EVIDENCE

It is very important that the evidence be taken in a way to have a high level of results once it is in the lab for analysis:

- DO NOT TAKE ANY EVIDENCE OR PACKAGE BACK TO THE FIRE STATIONS OR POLICE STATIONS. DO NOT LEAVE ANY EVIDENCE AT THE SCENE
- Police department should start the chain of evidence procedures and assure that the evidence is properly handled.
- Do not send unopened letters or packages to the lab. All specimens should be screened for radiological, explosive, and chemical.
- All evidence should be triple bagged and identified with zip lock type bags. Place case number, sample number, and person taking sample on the outside of the bag. Do not use duct tape on the bags.
- Notify the FBI and State Health

NOTIFICATION NUMBERS

FBI..... 579-1400
State Health.....538-6191 or 241-1172

WEST VALLEY CITY FIRE DEPARTMENT
WMD THREAT/HAZARD RISK ASSESSMENT

- ☐ What type of package has been sent, why it is suspicious?
- ☐ Is the package leaking or covered with unknown material?
- ☐ Has the person been threatened? Did the letter or package contain a threat?
- ☐ Has the person been threatened before?
- ☐ Obtain all information available from package;
  - ☐ Return address _____
  - ☐ Postmarking _____
  - ☐ Was the mail expected?
- ☐ Conduct logical checks to determine the validity of the mail.
- ☐ Contact sender, explain what you have, ask for explanation for the substance in the package.
- ☐ Has there been anything happen previously at the residence or business?
- ☐ What does the business do?
- ☐ For additional assistance contact the FBI

NOTES

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Emergency Response to Suspicious Envelopes/Packages/Containers	HM 003
	Rev. 1/09

SCOPE

The first arriving police officer or fire unit will follow these steps when responding to an unidentified or suspicious envelope, package, or container:

- Have dispatch ask caller to meet officer outside at the entrance to the facility or building, without the package.
- Have caller describe suspicious envelope, package, or container.
- Have caller answer questions attached to this protocol. If the answers to the questions indicate that the threat may be real, the officer is to call for assistance. That assistance will include a police supervisor, a fire supervisor, Haz-mat and/or bomb response.
- If the envelope, package, or container has been opened and the described contents indicate a potential threat, the officer is to call for assistance.
- If assistance is being requested, the officer shall give access and staging directions for all responders.
- If evacuation is indicated, the officer shall consult with his or her supervisor prior to initiating such action with the responsible part at the scene.
- Any person or persons that have been potentially exposed to a chemical or biological agent should be kept in an isolated area away from all other employees or citizens.
- The officer should avoid all potential exposures by maintaining the proper distance from the building and from potentially exposed individuals.

WMD THREAT/HAZARD RISK ASSESSMENT

- What type of package has been sent, why is it suspicious?
- Is the package leaking or covered with an unknown material?
- Has the person been threatened, i.e., did letter or package contain a threat?
- Has person threatened before?
- Obtain all information available from package;
    a) Return address
    b) Postmarking_____
    c) Was the mail expected?
- Conduct logical checks to determine the validity of the mail
- Contact sender, explain what you have, ask for explanation for the substance in the package.
- Has anything happened previously at the residence or business?

- What does the business do?
- For additional assistance contact the FBI (801-579-1400)
- For additional assistance contact the Health Department (801-538-6191)

NOTES:

R ecognize
A void
I solate
N otify

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Exposure Control Reporting of Infectious Disease or Chemical Contamination	HM 021
	Rev. 9/08

SCOPE

To outline the reporting procedure for Fire Department firefighters who experience a significant exposure to a potentially infectious biological substance or to toxic chemical substances.

RESPONSIBILITIES

Any biological or chemical exposure that may adversely affect the health of a firefighter while at work must be reported to the Exposure Control Officer. It is the responsibility of the Company Officer that this notification is made and that all required documentation is completed and distributed appropriately. It is the responsibility of the Exposure Control Officer to advise a potentially exposed firefighter, to account for and secure documentation of the exposure, and to track all future testing and treatment for the exposure as determined by the proper medical authority.

OPERATING PROCEDURE

If a firefighter suspects that he/she has been significantly exposed to an infectious agent or toxic chemical, he/she will report suspected exposure to the Company Officer. The Company Officer and Exposure Control Officer will then follow the given algorithm for infectious disease or toxic chemical exposures (see Appendix A).

The Company Officer will assure that the firefighter is notified of and follows the appropriate steps of the algorithm as indicated. Contact with the Exposure Control Officer will be made to help expedite treatment and follow up for the firefighter. The on-duty Battalion Chief will also be notified.

The West Valley City Fire Department Infectious Exposure Form will be completed, and copies will be sent to the on-duty Battalion Chief and the Exposure Control Officer. A copy will be sent by the Battalion Chief to the Operations Chief who will then notify the Administrative Officer, the Personnel Officer, and the Risk Management Officer.

Exposure Report Forms (ERF) <u>must</u> accompany the patient to Work Med or Pioneer Valley Hospital. The **green** copy of the ERF will be retained by the individual making the exposure report. The **pink** copy must accompany the industrial forms when submitted. The **white** copy goes to the Utah State Lab, and the **canary** copy must be sent to the Bureau of Epidemiology (Department of Health). A copy must also be provided for the Exposure Control Officer.

It will be the individual member's responsibility to follow up with the designated facility for any blood draws or treatment following a significant exposure, based on direction from the treating physician and advice from the Exposure Control Officer.

MEDICAL EXPOSURE SEVERITY RATING FOR INFECTIOUS DISEASES

Evaluating the significance of an infectious disease exposure depends on the communication of the details provided by the exposed firefighter and the Exposure Control Officer's use of the severity rating system. Four categories define exposure levels that firefighters may face when treating patients. In all cases, it is assumed that the exposed employee can immediately clean the exposed area of the body. If unable to do so, the severity of the exposure may be upgraded.

Severity Rating Levels

SIGNIFICANT exposure occurs whenever a patient's blood or body fluids, visibly contaminated with blood, contact an employee through percutaneous inoculation, an open wound, non-intact (chapped, abraded, or weeping) skin or mucous membrane. The single most common example is a needle stick.

MODERATE exposure occurs whenever a patient's body fluids contact an employee's mucus membranes. Mouth-to-mouth resuscitation or a patient sneezing / coughing on a firefighter are two examples. However, a patient with active tuberculosis, not on medication, who is coughing represents a significant risk of exposure to any care giver in the same room.

MINIMAL exposure occurs whenever a patient's blood or body fluids contact an employee's intact skin or a patient's intact skin contacts an employee's mucous membranes. For example, a firefighter arrives on the scene without gloves and has a child covered in blood thrust into his hands; or a combative patient grabs a firefighter's mouth.

PROBABLE-NONE occurs whenever a patient's intact skin contacts an employee's intact skin; this represents a low risk of exposure to infectious disease.

Exceptions to the ratings exist, and the employee should always look to protect themselves from these occurrences, one example is measles. Simply entering a room which an infectious measles patient has vacated within the hour represents a significant risk of infection. When doubt exists, consultation with the ECO or department physician should provide guidance for making an informed decision on the severity of a particular exposure.

MEDICAL EXPOSURE SEVERITY RATING FOR TOXIC CHEMICALS

Describing the nature of a toxic chemical exposure is dependant on the accuracy of the information provided by the exposed firefighter to the Exposure Control Officer. Like the infectious disease exposure rating system, the toxic chemical exposure system also uses four categories.

Severity Rating Levels

SIGNIFICANT exposure occurs when the firefighter becomes symptomatic of the exposure within forty-eight hours of the incident.

MODERATE exposure occurs when the firefighter becomes symptomatic of the exposure within two weeks of the incident.

MINIMAL exposure occurs when the firefighter tests positive for a specific chemical exposure, but does not exhibit any acute or delayed symptoms.

PROBABLE exposure occurs when the firefighter is in the presence of a toxic chemical, but does not test positive for any specific chemical and does not exhibit any acute or delayed symptoms.

DOCUMENTATION OF EXPOSURES / DISTRIBUTION OF EXPOSURE FORMS

As indicated by Appendix A (Algorithm for Infectious Disease or Toxic Chemical Exposures), any potential or actual exposure requires the completion of an industrial injury form. A copy of this form must be left with the medical provider, a copy must be sent to Utah Labor commission, a copy must go to Fire Administration, and a copy must go to the employee.

When an infectious disease exposure takes place, the WVCFD Infectious Disease or Toxic Chemical Form must be completed. A copy must be forwarded to the on-duty battalion chief and a copy must go to the department's Exposure Control Officer. The exposed firefighter should also keep a copy.

When an infectious disease exposure takes place, the Emergency Medical Service Provider Exposure Report Form (Form 350 - State of Utah - Labor Commission) must be completed. This form must be distributed in the following manner: A copy to the Labor Commission, a copy to the Utah State Lab (with a blood sample), a copy to the State Bureau of Epidemiology, and a copy to the employee.

APPENDIX A

WEST VALLEY CITY FIRE DEPARTMENT

Algorithm for Infectious Disease or Toxic Chemical Exposures

Exposure Reported to Company Officer

Exposure Control Officer & On-duty Battalion Chief Notified → Notification made to department's Safety Officer

Firefighter Reports to Work Care (Industrial injury forms completed) Or Pioneer Valley Hospital (Industrial injury forms completed)

Forward to the Exposure Control Officer ← Complete WVCFD Infectious Disease & Toxic Chemical Exposure Form → Forward to Battalion Chief

Labor Commission ← Complete Utah Infectious Disease Exposure Report Form → Utah State Lab

(Copy to Exposure Control Officer)

Employee ← → Bureau of Epidemiology

Exposure Control Officer reviews case with exposed firefighter and advises

Exposure Control Officer files hard copies of exposure documents and completes database form for the exposed firefighter

Exposure Control Officer tracks future testing and treatment to insure follow-up for the exposed firefighter

WEST VALLEY CITY FIRE DEPARTMENT

Infectious Disease or Toxic Chemical Exposure Form

To be filled out and returned to the Exposure Control Officer and Battalion Chief
(Not to be used in place of the Utah Exposure Report Form)

Exposed Employee: _____ Rank: _____

SS#: _____ Home Phone: _____

Incident #: _____ Shift: _____ District: _____

Name of Patient: _____ Sex: _____ Age: _____

Address: _____

Suspected or Confirmed Disease or Chemical: _____

Transported to: _____ Transported by: _____

Date of Exposure: _____ Time of Exposure: _____

Type of Incident (auto accident, trauma): _____

If a potential infectious disease, what were you exposed to:

Blood_____ Tears _____ Feces _____ Urine _____ Saliva _____

Sweat _____ Sputum _____ Vomitus _____ Other _____

If a potential toxic chemical, what were you exposed to:

Vapor_____ Liquid_____ Solid_____ Suspected or confirmed chemical_____

What part(s) of your body became exposed; be specific: _____

_____

_____

Did you have any open cuts, sores, rashes that became exposed; be specific: _____

_____

_____

How did exposure occur; be specific: _____

_____

_____

Did you seek medical attention: Yes _____ No _____

Where: _____ Date: _____

Contact Exposure Control Officer: Date: _____ Time: _____

Supervisor's Signature: _____ Date: _____

Employee's Signature: _____ Date: _____

WEST VALLEY CITY FIRE DEPARTMENT

Standard Operating Guidelines

Meth Lab Response	HM 017
	Rev.4/09

SCOPE

Due to the possible complexity of Meth Labs, West Valley City Fire Department requires a Haz-Mat Technician level response.

Possible hazards may include:

- Improvised booby traps or chemicals left intentionally in an unstable state
- Iodine
- Hydrogen Hydroxide
- Sodium Chloride
- Phosphoric Acid
- Acetone
- Isopropyl Alcohol
- Phosphine
- Ammonia
- Kerosene
- Lithium Hydride
- Phosphorus (yellow)
- Hydrogen Cyanide
- Propane

When serving a warrant on a location that may have or recently had a Meth Lab West Valley City Police Department will utilize one or both of the following teams, Special Operations-Narcotics or SWAT. West Valley City Fire Department has tactical medics know as TEMS assigned to the SWAT team. If SWAT is involved there will be a TEMS member available to act as liaison between Fire and Police. **The Narcotics team has members that are nationally trained and certified by the DEA. They will be available to assist the West Valley Fire Department Haz-Mat Team. Meth Labs are crime scenes and are often booby-trapped.**

The possible stages of a Meth Lab are as follows:

- Known operating lab
- Known boxed lab
- High suspicion of lab
- Low suspicion of lab
- Location recently contained a lab

Known Operating Lab:
If a known lab is present, the on-duty Haz-Mat Captain will be notified and arrangements made for possible detection, monitoring and decon procedures. If time allows, West Valley Police will notify the on-duty Battalion Chief and the Haz-Mat Manager with a request that the Haz-Mat Captain attend the SWAT/Special Operations Team Leader briefing.

Known Boxed Lab:
The procedure for a Known Boxed Lab is the same for an operating lab.

High Suspicion of Lab:
The procedure for a High Suspicion of Lab is the same for an operating lab.

Low Suspicion of Lab:
For a location that has a low suspicion of a lab, the TEMS leader will contact Fire Dispatch and request that the West Valley Fire Department be placed on standby. The Haz-Mat team will be on standby at the station for the 15-20 minutes that it takes to serve the warrant and secure the scene. If the time of day permits, the Haz-Mat Captain will be notified of the situation prior to the warrant service.

If decon measures are required, runoff will be contained and the PH level recorded and documented before disposing.

Wastewater Discharge

1201.1 PURPOSE AND SCOPE

The practices detailed in this policy are intended to minimize runoff releases associated with firefighting, fire training, emergency scene spills and discharges, trauma scene waste management and fire facility maintenance activities.

1201.2 POLICY

It is the policy of the West Valley City Fire Department to adhere to local, state and federal regulations established to minimize the adverse impacts to the environment from wastewater discharges by ensuring best management practices for department activities.

1201.3 NON-EMERGENCY ACTIVITIES

1201.3.1 DISCHARGES ASSOCIATED WITH FIRE TRAINING ACTIVITIES

Training activities should be performed in a manner that reduces or prevents discharges to the storm water systems. Occasionally, discharge into the storm water system is unavoidable (e.g., equipment failures). However, the following measures should be implemented to minimize the impact on water quality:

(a) Conduct fire training, where feasible, in facilities where runoff controls that protect the storm drain system have been engineered and built into the facility.

(b) Direct water flows to landscape or greenbelt areas whenever possible.

(c) When flowing water cannot be contained in the landscape areas, survey the area prior to the training exercise to ensure that debris will not enter the storm water system as a result of water flow generated during the drill.

(d) When practicable and necessary, divert flows to the sewer, with the permission of the local sewer agency.

(e) Use fog streams for short durations.

(f) Use lower gallon-per-minute nozzle settings.

(g) Prevent discharge of foam to the storm drain system. If training activities involve the use of foam, block off all potentially affected storm drain inlets with plastic sheeting and sandbags, construct a temporary berm, collect the runoff and discharge to the sanitary sewer after a defoaming agent has been applied.

1201.3.2 VEHICLE AND EQUIPMENT WASHING AND CLEANING

The following should be considered in order to prevent or reduce the discharge of pollutants to the storm drain system from vehicle and equipment washing and cleaning:

(a) Use cleaning methods that employ the minimal use of water, such as a wet chamois or non-water rinse, when applicable.

(b) Limit the use of all cleaning agents and, when feasible, use only water.

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(c) Remove debris from any area or facility that is used for washing and/or cleaning vehicles.

(d) Direct water flows to landscape or green areas, or contain the water on-site and allow it to evaporate and infiltrate whenever it is safe to do so without causing damage or erosion.

(e) Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash water to the sewer, either through the use of a wet-vac or a plumbed sanitary sewer connection.

(f) Use self-contained water recycling systems.

(g) Use off-site commercial washing and steam-cleaning facilities. Prohibit all steam cleaning discharge from entering the storm drain. Direct all steam-cleaning discharge to the sanitary sewer.

1201.3.3 VEHICLE FUELING

(a) The following measures should be taken to reduce the impact to storm water:

1. Protect the fueling area from storm water by installing a canopy.
2. Pave fueling area surfaces with Portland cement concrete (or other equivalent smooth impervious surface) with a 2 percent to 4 percent slope to prevent puddles.
3. Keep perimeter drains clear of debris at all times.
4. If a perimeter drain is not installed, install a berm or graded area to prevent run-off of storm water and spilled liquids.
5. Use a deadend sump to collect spills or install an oil-water separator.
6. Utilize vapor recovery nozzles to help control drips as well as air pollution.
7. Maintain a spill control kit at the refueling site.

(b) When fueling fire vehicles, members should take the following measures to prevent fuel spills and leaks:

1. Avoid fueling during rainy conditions in fuel areas that do not have a canopy.
2. When necessary to refuel during rainy conditions in fueling areas that do not have a canopy, the person refueling shall not leave the fueling area while fuel is flowing from the pump.
3. Avoid topping-off fuel tanks.
4. Use absorbent material on small spills and for general cleaning rather than hosing down an area. Remove the absorbent material promptly and dispose as hazardous waste.

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5. Avoid mobile fueling during non-emergency events if the vehicles and/or equipment can be brought to the refueling facility.

1201.3.4 VEHICLE AND EQUIPMENT MAINTENANCE AND REPAIR

A “dry shop” can help prevent or reduce the discharge of pollutants from vehicle and equipment maintenance as follows:

(a) Conduct vehicle and equipment maintenance in areas where precautions have been taken to prevent spills from entering the storm drain system.

(b) Use dry cleaning methods in maintenance and repair areas unless adequate precautions have been taken to prevent the discharge of wash water to the storm drain.

1201.3.5 HOSE WASHING AND CLEANING

The discharge of pollutants from washing and cleaning fire hoses and equipment may be prevented or reduced by using the following safeguards, as appropriate:

(a) Design new areas or facilities that will be used for washing and/or cleaning fire hoses in a way that prevents wash water or other debris from entering the storm drain or from receiving water that has not been adequately treated.

(b) Direct water flows to landscaped or green areas, or contain the water on-site and allow it to percolate through plant material or the landscape, or to evaporate completely whenever it is safe to do so without causing damage or erosion.

(c) Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash water to the sewer either through the use of a wet-vac or a plumbed sanitary sewer connection.

(d) When cleaning the wash area, use wet mop cleaning methods in small areas, when feasible.

(e) Use methods of cleaning fire hoses that employ the minimal use of water, such as high-pressure spray washers, when applicable.

(f) Consider the use of biodegradable cleaning agents.

1201.3.6 FACILITY MAINTENANCE

Facility maintenance should be conducted as follows:

(a) Use dry cleaning methods (e.g., sweeping) to clean impervious hardscape areas, such as apparatus floors, driveways, patios and walkways. Place debris in receptacles for solid waste disposal.

(b) Maintain landscape areas as required to limit introduction of leaves and other landscape waste into the storm water system.

(c) Monitor and maintain irrigation systems as required to minimize off-site discharge of irrigation run-off.

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(d) Maintain and repair structures using methods that do not result in the release of water, soil or waste into the storm drain system.

1201.3.7 SOLID WASTE AND HAZARDOUS MATERIALS STORAGE AREAS
Solid waste and hazardous materials storage areas should be maintained as follows:

(a) There should be a canopy or roof over solid waste and hazardous materials storage areas.

(b) There should be secondary containment (e.g., a metal or plastic pan with a raised edge) for hazardous materials storage areas.

(c) All trash and solid waste receptacles should have lids. Keep lids closed to prevent contact with rainfall and to ensure containment of waste within the storage area.

1201.4 EMERGENCY ACTIVITIES
It is not always possible to prevent discharge that occurs during emergency firefighting activities (e.g., flows necessary for the protection of life and property). However, when practicable, the following should be considered.

1201.4.1 DISCHARGES ASSOCIATED WITH EMERGENCY FIREFIGHTING ACTIVITIES
To the extent allowed by the circumstances at the scene and without compromising the health and safety of department members or the public, emergency firefighting activities should be performed in a manner that avoids or minimizes discharges to the storm water system, including the following:

- If possible, avoid directing firefighting flows directly on erodible surfaces if run-off will enter receiving waters or storm drains.
- If possible, apply firefighting flows so run-off will flow over vegetated areas prior to entering receiving waters or storm drains.

1201.4.2 TRAUMA SCENE CLEANUP
Trauma scene wastes (e.g., blood, human tissue) may be generated at various types of crime or accident scenes. This type of waste can pose a health risk to those responsible for overseeing and conducting the cleanup. The following procedures should be used when practicable to protect members and prevent any unnecessary discharge of material into the storm drain.

1201.4.3 CLEANUP OF TRAUMA SCENE WASTE ON PUBLIC PROPERTY
The Incident Commander (IC) should be familiar with any City ordinances regarding the cleanup of trauma scene waste on public property.

Decontamination and cleanup operations may include, but are not limited to, the following:

(a) Before proceeding with site cleanup, emergency responders must have the proper personal protective equipment (PPE), adequate supplies of bleach and sufficient water to properly complete the operation. Universal precautions must be utilized during any cleanup operation. Additional information and guidance for cleanup policies

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and procedures for bodily fluids may be obtained by contacting the county health department.

(b) Personnel shall wear gloves when washing or handling contaminated equipment, clothing or other materials. Additional PPE may be necessary if there is the potential for splashing.

(c) The Medical Examiner should remove any human tissue or body parts at the scene of a fatality, following its own policies and procedures. The Medical Examiner will generally not respond to a non-fatal incident for the purpose of human tissue removal.

(d) Human tissue, body parts or blood/bodily fluids in a solid state should not be allowed to enter a storm drain. Tissue found in the storm drain system should be removed to the maximum extent practicable.

(e) The county health department may be contacted, if needed, for consultation or assistance in trauma scene management or questions regarding legal disposition of medical waste.

1201.4.4 SPECIFIC CLEANUP PROCEDURES FOR SMALL SPILLS

(a) West Valley City Fire Department members may decontaminate and then wash down small amounts of human blood/bodily fluids that are still in a liquid state. A small spill is defined as a spill that can be thoroughly and completely disinfected with one gallon of 10 percent chlorine disinfectant. This determination should be made with the understanding that multiple applications may be necessary to accomplish full disinfection.

1. Members shall wear PPE to protect skin, mucus membranes, lungs and clothing from chlorine or trauma scene waste.
2. Members shall apply disinfectant to the liquid biowaste (foam may develop) and let it sit for a minimum of 10 minutes.
3. After 10 minutes, members shall wash down the area using a fire hose or pressurized water extinguisher.

(b) In non-emergency situations and when circumstances permit, members should also:

1. Attempt to move trash or miscellaneous debris from the path of the run-off so no additional or unnecessary material is discharged or carried into the storm drain.
2. If there is a choice between directing the run-off down a storm drain or a sewer, use the sewer.
3. Porous surfaces, such as asphalt, may require multiple repetitions to completely disinfect and thoroughly clean the area.

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1201.4.5 DISCHARGES ASSOCIATED WITH HAZARDOUS MATERIAL SPILLS

The City is the authority with responsibility for coordinating a response to hazardous material spills. The West Valley City Fire Department is a participating agency with specified responsibilities within the jurisdiction. The West Valley City Fire Department operates under a multi-agency Hazardous Materials Response Plan that describes procedures for the allocation of resources and assigns tasks during a hazardous materials release emergency. Fire department and law enforcement members shall respond to hazardous material releases according to response protocols established by each department under oversight of the City.

1201.4.6 NOTIFICATION OF SPILLS, RELEASES AND DISCHARGES

Spills, releases and discharges of pollutants shall be reported by the IC as required by all applicable state and federal laws. In addition, any such spills, releases and illegal discharges with the potential to endanger health, safety or the environment shall be reported by the IC to the Utah Department of Environmental Quality (DEQ) as soon as practicable after discovery. If it is safe to do so, necessary actions shall be taken to contain and minimize the spill, release or discharge.

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Permits and Agreements

Co Permittee Accountability Statement
UPDES Permit UTS000001, 2020-2025
UPDES Interlocal Accountability Agreement with WVC
West Valley City UPDES Media Agreement

CO-PERMIT REQUIREMENT ACCOUNTABILITY

Salt Lake County accepts responsibility for implementation of the following permit requirements of Jordan Valley Municipalities under UPDES Permit UTS000001, to be completed during the life of the permit and developed in detail in the municipalities Stormwater Management Plan.

1. County will prepare the Co-Permittee Identification and Accountability document identified in Part 1.5 at no direct cost to the City. The municipalities shall provide necessary information in a timely fashion to County for inclusion into document.

2. County will develop and implement a core County-wide Public Education and Outreach program identified in Part 4.2.1 at no direct cost to the municipality. Individual Municipal members must identify targets, distribute, track and record progress with this program as described in Parts 4.2.1.1 through 4.2.1.7. The municipalities shall provide necessary information in a timely fashion to County for inclusion into Annual Report documents. The Public Education and Outreach program will be coordinated through the Stormwater Coalition.

3. County will develop a portion of a public involvement/participation program identified in Part 4.2.2 at no direct cost to the municipality. Individual Municipalities must prepare their own SWMP Documents, post them to their own websites and maintain their own websites. The portion of the public involvement/participation program undertaken by the County will be coordinated through the Stormwater Coalition.

4. County will compile and submit to the State the portion of the annual report identified in 5.6.1 which details activities in Parts 4.2.1 and 4.2.2. which will include the municipalities required information. The municipality shall provide necessary information for this submittal to the County in a compatible electronic format as either word processing or spreadsheet as required. Information must be provided to the County at least 45 days prior to report submission deadline. If the municipality fails to submit information to County as described, the municipality shall be liable for State sanctions and penalties.

STATE OF UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Authorization to Discharge Municipal Storm Water Under the
Utah Pollutant Discharge Elimination System (UPDES)

UPDES PERMIT NUMBER UTS000001

This Permit is issued in compliance with the provisions of the Utah Water Quality Act, Utah Code Title 19, Chapter 5, (the "Act"), the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et. seq., as amended to date), and the rules and regulations made pursuant to those statutes, to the

JORDAN VALLEY MUNICIPALITIES, specifically,

SALT LAKE COUNTY, BLUFFDALE CITY, COTTONWOOD HEIGHTS, DRAPER CITY, GREATER SALT LAKE MUNICIPAL SERVICE DISTRICT, HERRIMAN CITY, HOLLADAY CITY, MIDVALE CITY, MILLCREEK, MURRAY CITY, RIVERTON CITY, SANDY CITY, SOUTH JORDAN CITY, SOUTH SALT LAKE CITY, TAYLORSVILLE CITY, WEST JORDAN CITY, AND WEST VALLEY CITY

This Permit shall become effective on **February 26, 2020**.

This Permit and the authorization to discharge shall expire at midnight, **February 25, 2025**, except as described in Part 6.3 of this Permit.

Signed this 26th day of February, 2020.

Erica Brown Gaddis, PhD
Director

DWQ-2020-005244

**UPDES PERMIT FOR DISCHARGES FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)**

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1.0 Coverage Under this Permit

1.1. Authority to Discharge

This Permit authorizes the discharge, to waters of the state of Utah, of storm water from Co-Permittees defined in Part 1.2. of this Permit. This authorization is subject to all of the terms and conditions of this Permit. This Permit does not authorize discharges prohibited under Part 1.4. of this Permit.

1.2. Permit Area and Eligibility

1.2.1. This Permit covers all the following separate jurisdictional areas located within Greater Salt Lake County as follows:

1.2.1.1. Areas covered under "Phase I" provisions in this Permit which includes unincorporated Salt Lake County. This permitted area covers all areas within the unincorporated boundary of Salt Lake County served by, or otherwise contributing to discharges from, the municipal separate storm sewer(s) owned or operated by Salt Lake County and also includes all Salt Lake County owned and operated storm drainage facilities ("countywide facilities") that are not owned or operated by the Greater Salt Lake Municipal Service District (MSD); and

1.2.1.2. Areas covered under "Phase II" provisions in this Permit which includes:

1.2.1.2.1 Salt Lake County "countywide" facilities owned and maintained by Salt Lake County that are within Greater Salt Lake County, but outside of the boundaries of Salt Lake City and unincorporated Salt Lake County that are not owned or operated by the MSD; and

1.2.1.2.2 Incorporated areas within Salt Lake County, which are defined as small municipal separate storm sewer systems as defined in *Utah Administrative Code* (UAC) R317-8-3.9 and listed below:

- Bluffdale City
- Cottonwood Heights
- Draper City
- Greater Salt Lake Municipal Service District
- Herriman City
- Holladay City
- Midvale City
- Millcreek City
- Murray City
- Riverton City
- Sandy City
- South Jordan City
- South Salt Lake City
- Taylorsville City

- West Jordan City
- West Valley City

1.2.1.2.3 Additional operators of small municipal separate storm sewers within the boundaries of Salt Lake County, which submit application and are approved for inclusion under the Permit during the course of this Permit cycle.

1.2.1.3. No operator of a Small MS4 described in 40 CFR 122.32 may discharge from that system without authorization from the *Director*. (See Utah Administrative Code Section R317-8-3.9(1)(h)(1)(a), which sets forth the Permitting requirement, and R317-8-1.10(13), which incorporates 40 CFR 122.32 by reference). Authorization to discharge under the terms and conditions of this Permit is granted if:

1.2.1.4. The operator submits a Notice of Intent (NOI) in accordance with Part 2.0 of this Permit;

1.2.1.5. The MS4 is located fully or partially within an urbanized area as determined by the latest Decennial Census by the Bureau of Census;

1.2.1.6. The operator is ordered by the *Director* to obtain coverage under this Permit, as provided in the UPDES rules, R317-8.

1.2.2. The following are types of authorized discharges:

1.2.2.1. *Storm water discharges.* This Permit authorizes storm water discharges to waters of the state from the Small MS4s identified in 1.2.1., except as excluded in Part 1.4.

1.2.2.2. *Non-storm water discharges.* The following non-storm water discharges do not need to be addressed unless the Co-Permittee or the *Director* identifies these discharges as significant sources of pollutants to waters of the state or as causing or contributing to a violation of water quality standards:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Footing drains
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Residual street wash water

- Dechlorinated water reservoir discharges
- Discharges or flows from emergency firefighting activity

1.3. Local Agency Authority

This Permit does not pre-empt or supersede the authority of local agencies to prohibit, restrict, or control discharges to storm drain systems or other water courses within their jurisdiction.

1.4. Limitations on Coverage

This Permit does not authorize:

1.4.1. Discharges that are mixed with sources of non-storm water unless such non-storm water discharges are in compliance with a separate UPDES Permit or are determined not to be a substantial contributor of pollutants to waters of the state.

1.4.2. Storm water discharges associated with industrial activity as defined in *Utah Administrative Code (UAC) R317-8-3.9(6)(c).*

1.4.3. Storm water discharges associated with construction activity as defined in *UAC R317-8-3.9(6)(d)(10)* and *R317-8-3.9(6)(d)(11).*

1.4.4. Storm water discharges currently covered under another Permit.

1.4.5. Discharges that would cause or contribute to in-stream exceedances of water quality standards as contained in *UAC R317-2*.

1.4.6. Discharges of any pollutant into any waters of the state for which a Total Maximum Daily Load (TMDL) has been approved by EPA unless the discharge is consistent with the TMDL. This consistency determination applies at the time a Notice of Intent is submitted. If conditions change after coverage is issued, the coverage may remain active provided the conditions and requirements of Part 3.1. of this Permit are complied with.

1.5. Co-Permittee(s) and Co-Permittee Accountability

1.5.1. The following entities are Co-Permittees covered in this Permit:

1.5.1.1. All entities listed in Permit Parts 1.2.1.1., 1.2.1.2.1, and 1.2.1.2.2, and;

1.5.1.2. Additional operators of small municipal separate storm sewers within the boundaries of Salt Lake County, which submit application and are approved for inclusion under the Permit during the course of this Permit cycle.

Each Co-Permittee is individually accountable for:

1.5.2. Permit compliance for discharges from portions of the MS4 where it is the operator and for areas within its legal jurisdiction, unless another Co-Permittee has agreed in

writing to assume that responsibility within the jurisdiction of the Co-Permittee as described in Appendix I: *Co-Permittee Identification and Accountability*;

1.5.3. Development of a Storm Water Management Program (SWMP) as further described in Part 4.0., in the MS4 area of their jurisdiction, unless another Co-Permittee has agreed to assume that responsibility within the jurisdiction of the Co-Permittee as described in Appendix I: *Co-Permittee Identification and Accountability*;

1.5.4. Implementation of a SWMP and ensuring that the six minimum control measures described in Part 4.2. are implemented for portions of the MS4 where it is the operator and in areas within its legal jurisdiction, unless another Co-Permittee has agreed to assume that responsibility within the jurisdiction of the Co-Permittee as described in Appendix I: *Co-Permittee Identification and Accountability*;

1.5.5. Permit compliance (all or part), development of a SWMP (all or part), and implementation of the SWMP (all or part) in an area outside of the Co-Permittees legal municipal jurisdiction if the Co-Permittee has agreed to the added responsibility as described in Appendix I: *Co-Permittee Identification and Accountability*;

1.5.6. Cooperation in compiling any shared portions of the annual reporting requirements listed in Part 5.6., except that a Co-Permittee is individually liable for any parts of the annual report that relate exclusively to portions of the MS4 where it is the operator as specified in Appendix I: *Co-Permittee Identification and Accountability*;

1.5.7. Phase I Co-Permittee, Salt Lake County, shall provide wet weather monitoring as described in Appendix III if required by the *Director.*

1.5.8. Phase I Co-Permittee, Salt Lake County shall comply with the additional Industrial and High Risk Runoff Permit requirements contained in Part 4.3. if industrial and high-risk runoff commercial sites meeting the criteria identified in Part 4.3.1. are located within the unincorporated boundary of Salt Lake County served by, or otherwise contributing to discharges from, the municipal separate storm sewer(s) owned or operated by Salt Lake County and also including all Salt Lake County owned and operated storm drainage facilities ("countywide facilities") that are not owned or operated by the Greater Salt Lake Municipal Service District (MSD).

1.6 Documents the Co-Permittees Shall Develop to Append the Permit

The following documents shall be developed and signed (in accordance with Part 6.8. *Signatory Requirements)* by the Co-Permittees, and will append the Permit as enforceable Permit conditions binding on the Co-Permittees:

1.6.1. Appendix I: *Co-Permittee Identification and Accountability* shall contain:

1.6.1.1. A list of all Co-Permittees covered by this Permit, a description of the legal jurisdiction of the Co-Permittees, MS4 boundaries, and the date the Co-Permittee is officially included as a Co-Permittee under this Permit (the Permit shall be modified as a minor modification, not requiring public notice, pursuant to *UAC R317-8-5.6(3)(d)* to officially include additional Co-Permittees);

1.6.1.2. Where Permit compliance and SWMP development and implementation accountability is transferred, all or part, to another Co-Permittee, a description of where (on which Co-Permittee) the accountability falls. The description shall assign clear and distinct accountability to the Co-Permittees involved as to who is responsible for what Permit compliance issues, who is to develop what portions of a SWMP, and who is to implement what portions of the SWMP;

1.6.1.3. Any necessary agreements, contracts, or memorandum of understanding (MOUs) between Co-Permittees and/or other municipal (or non-municipal) entities that affect the implementation and operation of SWMP.

1.6.2. Timing for Development & Inclusions or Exclusions of Co-Permittees:

1.6.2.1. The *Co-Permittee Identification and Accountability* document must be updated within 30 days of issuance of this Permit;

1.6.2.2. The *Co-Permittee Identification and Accountability* document shall be updated immediately for each new inclusion or exclusion of a Co-Permittee.

1.6.3. Appendix II: *Storm Water Management Plan* (for each MS4 listed in *Appendix I*):

1.6.3.1. The purposes, objectives, and the required contents of Appendix II are listed in Part 4.0 of this Permit.

1.6.4. Appendix III: *Storm Water Wet and Dry Weather Monitoring Plans*:

1.6.4.1. The purposes, objectives, and the required contents for Appendix III are listed in Part 5.2 of this Permit.

1.6.4.2. Modifications to this document shall be approved with a signature by the *Director*.

1.6.5. Modification and Maintenance of Appendices:

1.6.5.1. Co-Permittees shall keep the documents in the appendices current and up to date and attempt to achieve the purpose and objectives of the required document;

1.6.5.2. All modifications to the appendix documents shall show proof that it was submitted to the *Director* (a received date stamp from the Division of Water Quality, or verification e-mail from DWQ would be sufficient), and if required, it shall show that it was approved by the *Director* (a signature by the *Director* by an approval statement on the document, a separate letter signed by the *Director* approving of the modification, or similar is sufficient);

1.6.5.3. Each Appendix shall maintain a record of the original document, each modification, and the date the modification was made;

1.6.5.4. The *Director* may at any time make a written determination that parts or all of the appendix documents are unacceptable, wherein the Co-Permittee(s) must make modifications to the unacceptable parts within 30 days, or within a time frame specified by the *Director*.

2.0 Notice of Intent and Storm Water Management Program Requirements

2.1 New Applicants

The requirements of this Part apply only to Co-Permittees **not** covered under the previous Jordan Valley Municipalities UPDES Permit No. UTS000001, i.e**. New Applicants**. Co-Permittees that were covered under the previous Jordan Valley Municipalities UPDES Permit No. UTS000001, i.e. Renewal Applicants, and have submitted a notice of intent (NOI) at least 180 days prior to the expiration date of the previous Permit, shall instead follow the requirements of Part 2.3.

2.1.1. New applicants shall meet the following application requirements. The Notice of Intent (NOI) shall include submittal of the Storm Water Management Program (SWMP) document. Detailed information on SWMP requirements can be found in Part 4.0 of this Permit.

2.1.2. Within 180 days of notification from the *Director,* the operator of the MS4 shall submit a NOI form as provided by the Division athttps://deq.utah.gov/legacy/permits/water-quality/utah-pollutant-discharge-elimination-system/storm-water-municipal.htm. (The *Director* retains the right to grant permission for a later submission date upon good cause shown). One original completed NOI shall be submitted, by mail or hand delivery to:

Attention: MS4 Program Coordinator
UPDES Storm Water Section
Department of Environmental Quality
Division of Water Quality
195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

2.1.3. Late submittal of an NOI is prohibited (unless permission has been granted by the *Director*). If a late NOI is submitted, authorization is only for discharges that occur after Permit coverage is granted. The *Director* reserves the right to take appropriate enforcement actions for any unpermitted discharges.

2.1.4. Where application is made by a new applicant that has assumed operational control of an MS4 for which coverage under this Permit was previously held by a separate entity, the *Director* may determine that the new applicant shall comply with the Permit requirements in this Permit, as directed for Renewal Permittees. Notification shall be made by the *Director* of this requirement in writing to the New Applicant prior to issuance of Permit coverage

2.1.5. Implementation of the Co-Permittee's SWMP shall include the six minimum control areas, including Measurable Goals, described in Part 4.2. Measurable Goals for each of the program areas shall include, as appropriate, the year by which the Co-Permittee will undertake required actions, including interim milestones and the frequency of the action if applicable.

2.1.6. Implementation of the Co-Permittee's SWMP as described in the Co-Permittee's application is required to begin within 30 days after the completed application is

submitted. The Co-Permittee shall fully develop and implement the SWMP as discussed in Part 4.0 of the Permit by the end of the Permit term unless a more restrictive timeframe is indicated.

2.1.7. If an Operator is designated by the *Director* as requiring Permit coverage later than one year after the effective date of this General Permit, the *Director* may approve alternative deadlines that would allow the Co-Permittee to have its program areas implemented.

2.2. Contents of the Notice of Intent

The Notice of Intent requires, at a minimum, the following information:

2.2.1. Name, address, and telephone number of the principal executive officer, ranking elected official or other duly authorized employee in charge of municipal resources used for implementation of the SWMP;

2.2.2. Name(s)/ identification of waters of the state as defined by UAC R317-1-1.32 that receive discharges from the Co-Permittee's MS4;

2.2.3. Name of the person responsible for overseeing implementation and coordination of the SWMP;

2.2.4. Summary description of the overall water quality concerns, priorities, and measurable goals specific to the Co-Permittee that were considered in the development of the SWMP;

2.2.5. The SWMP document shall consist of, at a minimum, a description of the program elements that will be implemented (or already exist) for each of the SWMP minimum control measures. The plan shall be detailed enough for the Division to determine the Co-Permittee's general strategy for complying with the required items in each of the six minimum control measures in the SWMP document (see Part 4.2 of this Permit);

2.2.6. Information on the chosen Best Management Practices (BMPs) and the measurable goals for each of the storm water minimum control measures in Part 4.2 of this Permit and, as appropriate, the timeframe by which the Co-Permittee will achieve required actions, including interim milestones;

2.2.7. Co-Permittees shall each submit an NOI and individual SWMP document which will clearly identify the areas of the MS4 for which each of the Co-Permittees are responsible. Co-Permittees which are relying on another entity(ies) to satisfy one or more of their Permit obligations shall include with the NOI, a summary of the Permit obligations that will be carried out by the other entity(ies). During the term of the Permit, Co-Permittees may terminate or amend shared responsibility arrangements by notifying the *Director*, provided this does not alter implementation deadlines.

2.2.8. Certification and signature requirements in accordance with Part 6.8.

2.3. Storm Water Management Program Plan Description for Renewal Co-Permittees

2.3.1. The requirements of this part apply only to **Renewal Co-Permittees** that were covered under the previous Jordan Valley Municipalities UPDES Permit No. UTS000001. New applicants are not required to meet the requirements of this Part and instead shall follow the requirements of Part 2.0.

2.3.2. Renewal Co-Permittees shall submit a **revised SWMP document** to the *Director* within 180 days of the effective date of this Permit, which includes at a minimum, the following information:

2.3.2.1. Permit number;

2.3.2.2. MS4 location description and map;

2.3.2.3. Information regarding the overall water quality concerns, priorities, and measurable goals specific to the Co-Permittee that were considered in the development and/or revisions to the SWMP document;

2.3.2.4. A description of the program elements that will be implemented (or are already being implemented) in each of the six minimum control measures (see Part 4.0);

2.3.2.5. A description of any modifications to ordinances or long-term/ongoing processes implemented in accordance with the previous MS4 Permit for each of the six minimum control measures;

2.3.2.6. A description of how the Co-Permittee intends to meet the Permit requirements as described in Part 4.0 by either referencing existing program areas that already meet the Permit requirements or a description and relevant measurable goals that include, as appropriate, the year by which the Co-Permittee will achieve required actions, including interim milestones.

2.3.2.7. Indicate the joint submittal (s) of Co-Permittees (if applicable) and the associated responsibility (ies) in meeting requirements of the SWMP.

2.3.2.8. Certification and signature requirements in accordance with Part 6.8.

2.3.2.9. The revised SWMP document shall contain specific details for complying with the required items in each of the six minimum control measures contained within the SWMP document (See Part 4.2.).

3.0. Special Conditions

3.1. Discharges to Water Quality Impaired Waters

3.1.1. Applicability: Co-Permittees shall:

3.1.1.1. Determine whether storm water discharge from any part of the MS4 contributes to a 303(d) listed (i.e., impaired) waterbody. A 303(d) list of impaired water bodies is available at https://enviro.deq.utah.gov/

Water quality impaired waters means any segment of surface waters that has been identified by the Division as failing to support classified uses. If the Co-Permittee has discharges meeting these criteria, the Co-Permittee shall comply with Part 3.1.2. below and if no such discharges exist, the remainder of this Part 3.1 does not apply.

3.1.1.2. If the Co-Permittee has "303(d)" discharges described above, the Co-Permittee must also determine whether a Total Maximum Daily Load (TMDL) has been developed by the Division and approved by EPA for the listed waterbody. If there is an approved TMDL, the Permittee must comply with all requirements associated with the TMDL as well as the requirements of Part 3.1.2. below. If no TMDL has been approved, the Co-Permittee must comply with Part 3.1.2. below and any TMDL requirements once it has been approved. TMDL requirements may be put into effect at any time during this Permit term.

3.1.2. Water Quality Controls for Discharges to Impaired Water bodies. If the Co-Permittee discharges to an impaired waterbody, the Co-Permittee shall include in its SWMP document a description of how the Co-Permittee will control the discharge of the pollutants of concern. This description must identify the measures and BMPs that will collectively control the discharge of the pollutants of concern. The measures must be presented in the order of priority with respect to controlling the pollutants of concern.

3.1.3. Where a discharge is already authorized under this Permit and is later determined to cause or have the reasonable potential to cause or contribute to the violation of an applicable water quality standard, the *Director* will notify the Co-Permittee of such violation(s). The Co-Permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and document these actions as required by the *Director*. If violations remain or re-occur, coverage under this Permit may be terminated by the *Director* and an alternative general Permit or individual Permit may be issued. Compliance with this requirement does not preclude any enforcement activity as provided by the *Utah Water Quality Act* for the underlying violation.

3.2. Nitrogen and Phosphorus Reduction

3.2.1. As part of the Co-Permittee's Storm Water Management Program (SWMP), all Co-Permittee's must specifically address the reduction of water quality impacts associated with nitrogen and phosphorus in discharges from the MS4.

3.2.1.1. The Co-Permittee can meet the requirements of this section through contribution to a collaborative program (e.g., storm water coalitions) to evaluate, identify, target, and provide outreach that addresses sources within the Co-Permittee's watershed.

3.2.1.2. The Co-Permittee must determine and target sources (e.g., residential, industrial, agricultural, or commercial) that are contributing to, or have the potential to contribute, nitrogen and phosphorus to the waters receiving the discharge authorized under this Permit.

3.2.1.3. The Co-Permittee shall prioritize which targeted sources are likely to obtain a reduction in nitrogen and phosphorus discharges through education. The Co-Permittee must distribute educational materials or equivalent outreach to the prioritized targeted sources. Educational materials or equivalent outreach must describe storm water quality impacts associated with nitrogen and phosphorus in storm water runoff and illicit discharges, the behaviors of concern, and actions that the target source can take to reduce nitrogen and phosphorus. The Co-Permittee may incorporate the education and outreach to meet this requirement into the education and outreach strategies provided in accordance with Permit Part 4.2.1.

4.0 Storm Water Management Program

Co-Permittees covered under the previous Jordan Valley Municipalities Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems, i.e. **Renewal Co-Permittees**, are expected to have fully implemented all of the following six minimum control measures as required in the previous permit term. Co-Permittees that were newly designated during the previous Permit term have 5 years from the date of their submitted NOI to develop, fully implement and enforce their Storm Water Management Program (SWMP). A Renewal Co-Permittee must continue to implement its SWMP designed to reduce the discharge of pollutants from the MS4 as described in the application and submittals provided in accordance with the previous Jordan Valley Municipalities Permit, while updating its SWMP document pursuant to this permit. This Permit does not extend the compliance deadlines set forth in the previous Jordan Valley Municipalities MS4 Permit unless specifically noted. All requirements contained in this renewal permit are effective immediately unless an alternative timeframe is indicated.

4.1. Requirements

4.1.1. All Co-Permittees shall develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants to the Maximum Extent Practicable from the MS4, protect water quality, and satisfy the appropriate water quality requirements of the *Utah Water Quality Act.* The SWMP must include the six minimum control measures described in Part 4.2 of this Permit.

4.1.1.1. The SWMP shall be developed and implemented in accordance with the schedules contained in Part 4.0. of this Permit.

4.1.2. Each Co-Permittee shall have an ongoing documentation process for gathering, maintaining, and using information to conduct planning, set priorities, track the development and implementation of the SWMP, evaluate Permit compliance/non-compliance, and evaluate the effectiveness of the SWMP implementation.

4.1.2.1. Each Co-Permittee shall track the number of inspections performed, official enforcement actions taken, and types of public education activities implemented as required for each SWMP component. This information shall be provided to the *Director* upon request and used by the *Director* to determine compliance with this Permit.

4.1.2.2. Each Co-Permittee shall secure the resources necessary to meet all requirements of this Permit. Each Co-Permittee shall conduct an annual analysis of the capital and operation and maintenance expenditures needed, allocated, and spent as well as the necessary staff resources needed and allocated to meet the requirements of this Permit, including any development, implementation, and enforcement activities required. Each Co-Permittee must submit a summary of its fiscal analysis with each annual report.

4.1.3. The SWMP document shall include BMPs that the Co-Permittee or another entity will implement for each of the storm water minimum control measures.

4.1.3.1. The measurable goals for each of the BMPs shall include, as appropriate, the months and years in which the Co-Permittee will undertake required actions, including interim milestones and the frequency of the actions.

4.1.3.2. The SWMP document shall indicate the person or persons responsible for implementing or coordinating the BMPs contained within the SWMP document.

4.1.3.3. Within 180 days of the effective date of the Permit, the Co-Permittee shall revise the SWMP document to clearly identify the roles and responsibilities of all offices, departments, divisions, or sub-sections and if necessary other responsible entities and it shall include any necessary agreements, contracts, or memorandum of understanding (MOUs) between said entities that affect the implementation and operation of the SWMP. Necessary agreements, contracts, and MOUs shall deal with coordination or clarification of the responsibilities associated with the detection and elimination of improper connections or illicit discharges to the MS4, BMP coordination or other coordinated programs or sensitive issues of unclear or overlapping responsibility. Such agreements, contracts, and MOUs shall be retained by the Co-Permittees as required by the SWMP document.

4.1.3.4 Failure to meet these requirements with a good faith effort and within the timeframes set forth may result in an enforcement action by the *Director*.

4.2. Minimum Control Measures

Co-Permittees covered under the previous Jordan Valley Municipalities UPDES Permit No. UTS000001, i.e. **Renewal Co-Permittees**, are expected to have fully implemented Storm Water Management Programs (SWMPs) that reflect the permit requirements of the previous permit cycle. A Renewal Co-Permittee shall continue to implement its SWMP as described in the application and submittals provided in accordance with the previous Jordan Valley Municipalities MS4 Permit, while updating its SWMP document pursuant to this renewal Permit to achieve pollutant reductions to the Maximum Extent Practicable from the MS4, as specified in Part 4.1. This Permit does not extend the compliance deadlines set forth in the previous MS4 Permit or any corrective action plans and associated schedules unless specifically noted.

To achieve pollutant reductions to the Maximum Extent Practicable, Co-Permittees shall include the following six minimum control measures in the SWMP:

4.2.1. Public Education and Outreach on Storm Water Impacts

The Co-Permittee shall implement a public education and outreach program to promote behavior change by the public to reduce water quality impacts associated with pollutants in storm water runoff and illicit discharges. Outreach and educational efforts shall include a multimedia approach and shall be targeted and presented to specific audiences for increased effectiveness. The educational program shall include documented education and outreach efforts for the following four audiences: (1) residents, (2) institutions, industrial and commercial facilities, (3) developers and contractors (construction), and (4) MS4 owned or operated facilities. The minimum performance measures which should be based on the land uses and target audiences found within the community include:

4.2.1.1. Target specific pollutants and pollutant sources determined by the Co-Permittee to be impacting, or have the potential to impact, the beneficial uses of receiving water. This includes providing information which describe the potential impacts from storm water discharges; methods for avoiding, minimizing, reducing and /or eliminating the adverse impacts of storm water discharges; and the actions individuals can take to improve water quality, including encouraging participation in local environmental stewardship activities, based on the land uses and target audiences found within the community;

4.2.1.2. Provide and document information given to the general public of the Co-Permittee's prohibitions against and the water quality impacts associated with illicit discharges and improper disposal of waste. The Co-Permittee shall at a minimum consider the following topics. These topics are not inclusive and the Co-Permittee shall focus on those topics most relevant to the community: maintenance of septic systems; effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers); benefits of onsite infiltration of storm water; effects of automotive work and car washing on water quality; proper disposal of swimming pool water; and proper management of pet waste.

4.2.1.3. Provide and document information given to institutions, industrial, and commercial facilities on an annual basis of the Co-Permittee's prohibition against and the water quality impacts associated with illicit discharges and improper disposal of waste. The Co-Permittee shall at a minimum consider the following topics. These topics are not inclusive and the Co-Permittee shall focus on those topics most relevant to the community: proper lawn maintenance (use of pesticides, herbicides and fertilizer); benefits of appropriate onsite infiltration of storm water; building and equipment maintenance (proper management of waste water); use of salt or other deicing materials (cover/prevent runoff to storm system and contamination to ground water); proper storage and management of materials and dumpsters (cover and pollution prevention); and proper management of parking lot surfaces (sweeping). This education can also be a part of the Illicit Discharge Detection and Elimination measure detailed in Part 4.2.3.

4.2.1.4. Provide and document information given to engineers, construction contractors, developers, development review staff, and land use planners concerning the development of storm water pollution prevention plans (SWPPPs) and BMPs for reducing adverse impacts from storm water runoff from development sites. This education can also be a part of the Construction Site Storm Water Runoff minimum control measure detailed in Part 4.2.4.

4.2.1.5. Provide and document information and training given to MS4 engineers, development and plan review staff, land use planners, and other parties as applicable to learn about Low Impact Development (LID) practices, green infrastructure practices, and to communicate the specific requirements for post-construction control and the associated Best Management Practices (BMPs) chosen within the SWMP.

4.2.1.6. An effective program shall show evidence of focused messages and audiences as well as demonstration that the defined goal of the program has been achieved. The Co-Permittee must define the specific messages for each audience. The Co-Permittee must identify methods that will be used to evaluate the effectiveness of the

educational messages and the overall education program. Any methods used to evaluate the effectiveness of the program shall be tied to the defined goals of the program and the overall objective of changes in behavior and knowledge.

4.2.1.7. The Co-Permittee shall include written documentation or rationale as to why particular BMPs were chosen for its public education and outreach program.

4.2.2. Public Involvement/Participation

The Co-Permittee shall implement a program that complies with applicable State and Local public notice requirements. The SWMP shall include ongoing opportunities for public involvement and participation such as advisory panels, public hearings, watershed committees, stewardship programs, environmental activities, other volunteer opportunities, or other similar activities. The Co-Permittee should involve potentially affected stakeholder groups, which include but is not limited to, commercial and industrial businesses, trade associations, environmental groups, homeowners associations, and education organizations. The minimum performance measures are:

4.2.2.1. Co-Permittees shall adopt a program or policy directive to create opportunities for the public to provide input during the decision making processes involving the development, implementation and update of the SWMP document including development and adoption of all required ordinances or regulatory mechanisms.

4.2.2.2. Renewal Co-Permittees shall make the revised SWMP document available to the public for review and input within **120** days from the effective date of this Permit. New Permittees shall make the SWMP document available to the public for review and input within **180** days of receiving notification from the *Director* of the requirement for Permit coverage.

4.2.2.3. A current version of the SWMP document shall remain available for public review and input for the life of the Permit. The Co-Permittee shall post the latest version of the SWMP within 180 days from the effect date of the Permit on their website and shall clearly denote a specific contact person and phone number or email address to allow the public to review and provide input for the life of the Permit.

4.2.2.4. The Co-Permittee shall at a minimum comply with State and Local public notice requirements when implementing a public involvement/participation program.

4.2.3. Illicit Discharge Detection and Elimination (IDDE)

All Co-Permittees shall revise as necessary, implement and enforce an IDDE program to systematically find and eliminate sources of non-storm water discharges from the MS4 and to implement defined procedures to prevent illicit connections and discharges according to the minimum performance measures listed below. The IDDE program shall be described in writing, incorporated as part of the Co-Permittee's SWMP document, and contain the elements detailed in this part of the Permit. The minimum performance measures are:

4.2.3.1. Maintain a current storm sewer system map of the MS4, showing the location of all municipal storm sewer outfalls with the names and location of all State waters that receive discharges from those outfalls, storm drain pipe and other storm water conveyance structures within the MS4.

4.2.3.2. Effectively prohibit, through ordinance or other regulatory mechanism, non-storm water discharges to the MS4, including spills, illicit connections, illegal dumping and sanitary sewer overflows ("SSOs") into the storm sewer system, require removal of such discharges consistent with Part 4.2.3.6. of this Permit, and implement appropriate enforcement procedures and actions. The Co-Permittee must apply escalating enforcement procedures as necessary for the severity of violation and/or the recalcitrance of the violator. Exceptions are discharges pursuant to a separate UPDES Permit (other than the UPDES Permit for discharges from the MS4) and non-storm water discharges listed in Part 1.2.2.2.

4.2.3.2.1. The Co-Permittee's IDDE program must have adequate legal authority to detect, investigate, eliminate and enforce against non-storm water discharges, including illegal dumping, into the MS4. Adequate legal authority consists of an effective ordinance, by-law, or other regulatory mechanism. The documented IDDE program that is included in the Co-Permittee's SWMP shall include a reference or citation of the authority the Co-Permittee will use to implement all aspects of the IDDE program.

4.2.3.3. Implement a written plan to detect and address non-storm water discharges to the MS4, including spills, illicit connections, sanitary sewer overflows and illegal dumping. The plan shall include:

4.2.3.3.1 Written systematic procedures for locating and listing the following **priority areas** likely to have illicit discharges (if applicable to the jurisdiction):

- Areas with older infrastructure that are more likely to have illicit connections;
- Industrial, commercial, or mixed use areas;
- Areas with a history of past illicit discharges;
- Areas with a history of illegal dumping;
- Areas with onsite sewage disposal systems;
- Areas with older sewer lines or with a history of sewer overflows or cross-connections; and
- Areas upstream of sensitive water bodies; and,
- Other areas the Co-Permittee determines to be likely to have illicit discharges

The Co-Permittee shall document the basis for its selection of each **priority area** and create a list of all **priority areas** identified in the system. This **priority area** list shall be updated annually to reflect changing priorities.

4.2.3.3.2 Field inspections of areas which are determined to be a **priority area** as identified in Permit Part 4.2.3.3.1 must be conducted annually at a minimum. Priority area inspection activities shall utilize an inspection form to document findings.

4.2.3.3.3 Dry weather screening (see Definition 7.13) for the purpose of verifying outfall locations and detecting illicit discharges that discharge within the Co-Permittee's jurisdiction to a receiving water. All outfalls shall be inspected at least once during the 5-year Permit term. Dry weather screening activities shall utilize an inspection form to document findings.

4.2.3.3.4. If the Co-Permittee discovers or suspects that a discharger may need a separate UPDES permit (e.g., Industrial Storm Water Permit, Dewatering Permit), the Co-Permittee shall notify the *Director*.

4.2.3.4. Implement standard operating procedures (SOPs) or similar type of documents for tracing the source of an illicit discharge; including procedures such as: visual inspections, and when necessary, opening manholes, using mobile cameras, using field tests of selected chemical parameters as indicators of discharge sources, collecting and analyzing water samples for the purpose of determining sanctions or penalties, and/or other detailed inspection procedures.

4.2.3.5. Implement SOPs or similar type of documents for characterizing the nature of, and the potential public or environmental threat posed by, any illicit discharges found by or reported to the Co-Permittee by the hotline or other telephone number described in 4.2.3.9. These procedures shall include detailed instructions for evaluating how the discharge shall be immediately contained and steps to be taken for containment of the discharge. Compliance with this provision will be achieved by initiating an investigation immediately upon being alerted of a potential illicit discharge.

4.2.3.5.1. When the source of a non-storm water discharge is identified and confirmed, the Co-Permittee shall record the following information in an inspection report: the date the Co-Permittee became aware of the non-storm water discharge, the date the Co-Permittee initiated an investigation of the discharge, the date the discharge was observed, the location of the discharge, a description of the discharge, the method of discovery, date of removal, repair, or enforcement action; date, and method of removal verification. Analytical monitoring may be necessary to aid in the identification of potential sources of an illicit discharge and to characterize the nature of the illicit discharge. The decision process for utilizing analytical monitoring shall be fully documented in the inspection report.

4.2.3.6. Implement SOPs or similar type of documents for ceasing the illicit discharge, including notification of appropriate authorities; notification of the property owner; technical assistance for removing the source of the discharge or otherwise eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated.

4.2.3.6.1. Upon detection of an illicit discharge and upon confirmation of responsible parties, the Co-Permittee shall take actions to require immediate cessation of illicit discharges in accordance with its enforceable legal authorities established pursuant to Part 4.2.3.2.1. of this Permit.

4.2.3.6.2. Although Co-Permittees are required to prohibit illicit discharges within their boundaries and to take appropriate action to detect and address any violations, this Permit does not impose strict liability on Co-Permittees.

4.2.3.6.3. All IDDE investigations shall be thoroughly documented and may be requested at any time by the *Director.* If a Co-Permittee is unable to meet the minimum performance measures outlined in Parts 4.2.3.5. or 4.2.3.6., the Co-Permittee must immediately submit to the *Director* written documentation or rationale describing the circumstances why compliance with the minimum performance measures was not possible. All IDDE documentation shall be retained by the Co-Permittee as required by the SWMP document.

4.2.3.7. Co-Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.

4.2.3.8. Co-Permittees shall promote or provide services for the collection of household hazardous waste.

4.2.3.9. Co-Permittees shall publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. A written record must be kept of all calls received, all follow-up actions taken, and any feedback received from public education efforts.

4.2.3.9.1. The Co-Permittee shall develop a written spill/dumping response SOPs or similar type of document and a flow chart for internal use, that shows the procedures for responding to public referrals of illicit discharges, the various responsible agencies and their contacts, and who would be involved in illicit discharge incidence response, even if it is a different entity other than the Co-Permittee. The procedure and list shall be incorporated as part of the IDDE program and incorporated into the Co-Permittee's SWMP document. The list must be maintained and updated as changes occur.

4.2.3.10. Co-Permittees shall adopt and implement procedures for program evaluation and assessment which includes maintaining a database for mapping, tracking of the number and type of spills or illicit discharges identified; and inspections conducted.

4.2.3.11. Co-Permittees shall at a minimum, require that all staff, contracted staff, or other responsible entities, that as part of their normal job responsibilities might come into contact with or otherwise observe an illicit discharge or illicit connection to the MS4 including office personnel who might receive initial reports of illicit discharges, receives annual training in the IDDE program including identification, investigation, termination, cleanup, and reporting of illicit discharges including spills, improper disposal, and illicit connections. Co-Permittees shall require all new hires are trained within 60 days of hire date and annually thereafter, at a minimum. Follow-up training shall be provided as needed to address changes in procedures, methods for staffing. Training shall include how to identify a spill, an improper disposal, or an

illicit connection to the MS4 and proper procedures for reporting the illicit discharge. Training records must be kept and shall include dates, activities or course descriptions, and names and positions of staff in attendance. The Permittee shall include a summary of such training in the annual report.

4.2.3.12. The *Director* reserves the right to request documentation or further study of a particular non-storm water discharge of concern, to require a reasonable basis for allowing the non-storm water discharge and excluding the discharge from the Co-Permittee's program, and to require inclusion of the discharge in the Co-Permittee's program, if water quality concerns cannot otherwise be reasonably satisfied.

4.2.4. Construction Site Storm Water Runoff Control

All Co-Permittees shall revise as necessary, implement and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction sites with a land disturbance of greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre according to the minimum performance measures listed below. Public and private projects, including projects proposed by the Co-Permittee's own departments and agencies, shall comply with these requirements. The minimum performance measures are:

4.2.4.1. Revise as necessary and enforce an ordinance or other regulatory mechanism that requires the use of erosion and sediment control practices at construction sites. The ordinance or other regulatory mechanism shall ensure compliance with all requirements set forth in the most current UPDES Storm Water General Permits for Construction Activities, which can be found at https://documents.deq.utah.gov/water-quality/permits/updes/DWQ-2017-003485.pdf. The ordinance or other regulatory mechanism shall include sanctions to ensure compliance. The ordinance or other regulatory mechanism shall apply, at a minimum, to construction projects disturbing greater than or equal to one acre and to construction projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre. Existing local requirements to apply storm water controls at sites less than 1 acre or not part of a Common Plan of Development may be retained.

4.2.4.1.1. The ordinance or other regulatory mechanism shall require construction operators to prepare a Storm Water Pollution Prevention Plan (SWPPP) and apply sediment and erosion control BMPs as necessary to protect water quality, reduce the discharge of pollutants, and control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality. The SWPPP requirements shall ensure compliance with all requirements set forth in the most current UPDES Storm Water General Permits for Construction Activities.

4.2.4.1.2. The ordinance or other regulatory mechanism shall include a provision for access by qualified personnel to inspect construction sites as well as storm water BMPs on private properties that discharge to the MS4.

4.2.4.1.3. Co-Permittees shall require construction sites with a land disturbance of greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre, obtain coverage under the current UPDES Storm Water General Permits for Construction Activities. Coverage can be obtained by completing an NOI as well as renewed online at: https://secure.utah.gov/account/log-in.html.

4.2.4.2. Develop a written enforcement strategy to ensure the ordinance or other regulatory mechanism is followed which shall include:

4.2.4.2.1. Specific processes and sanctions to minimize the occurrence of violations, obtain compliance from violators which shall include appropriate, escalating enforcement procedures and actions including an appeals process that is published in a publicly accessible location.

4.2.4.2.2. Must document and track all enforcement actions.

4.2.4.3. Development and implementation of a checklist for pre-construction SWPPP review that is consistent with the requirements of the current UPDES Storm Water General Permits for Construction Activities and keep records for, at a minimum, all construction sites that disturb greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre, to ensure plans are complete and in compliance with State regulations. Co-Permittees shall keep records of these projects for five years or until construction is completed, whichever is longer. Prior to construction, the Co-Permittee shall:

4.2.4.3.1. Conduct a pre-construction meeting which includes a review of the site design, the planned operations at the construction site, planned BMPs during the construction phase, the planned BMPs to be used to manage runoff created after development, as well as the Co-Permittee's enforcement policy.

4.2.4.3.2. Identify priority construction sites considering the following factors at a minimum:

- Soil erosion potential;
- Site slope;
- Project size and type;
- Sensitivity of receiving water bodies (impaired or high quality waters);
- Proximity to receiving water bodies; and,
- Non-storm water discharges and past record of non-compliance by the operators of the construction site.

4.2.4.4. All Co-Permittees shall develop and implement SOPs or similar type of documents for construction site inspection and enforcement of construction storm water pollution control measures. The procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. An individual or entity who prepares a SWPPP for a construction project may not perform the construction site inspections required of Part 4.2.4.4.1 and 4.2.4.4.3 on behalf of the Co-Permittee. The Co-Permittee shall have the authority to the extent authorized by law to impose sanctions to ensure compliance with the local program. These procedures and regulatory authorities shall be written and documented in the

SWMP. The construction site storm water runoff control inspection program shall provide:

4.2.4.4.1. Inspections of all new construction sites with a land disturbance of greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre at least monthly by qualified personnel using the Construction Storm Water Inspection Form (Checklist) found on the Division's website at: https://deq.utah.gov/legacy/permits/water-quality/utah-pollutant-discharge-elimination-system/docs/2015/06Jun/InspectionChecklist2.pdf.

A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollutant prevention, who possesses the skills to assess conditions at effectiveness of any storm water controls selected and installed to meet the requirements of this permit, such as but not limited to the following:

- Utah Registered Storm Water Inspector (RSI)
- Certified Professional in Erosion and Sediment Control (CPESC)
- Certified Professional in Storm Water Quality (CPSWQ)
- Certified Erosion, Sediment, and Storm Water Inspector (CESSWI)
- Certified Inspector of Sediment and Erosion Control (CISEC)
- National Institute for Certification in Engineering Technologies, Erosion and Sediment Control, Level 3 (NICET)
- Utah Department of Transportation Erosion Control Supervisor (ECS) (applicable to road/street projects only)

4.2.4.4.2. The Co-Permittee shall inspect all phases of construction: prior to land disturbance, during active construction, and following active construction. The Co-Permittee shall include in its SWMP document a procedure for being notified by construction operators/owners of their completion of active construction so that verification of final stabilization and removal of all temporary control measures may be conducted. This procedure must be provided to the construction operator/owner before active construction begins.

4.2.4.4.3. Inspections by the MS4 of priority construction sites shall be conducted at least every two weeks using the Construction Storm Water Inspection Form (Checklist) found on the Division's website at https://deq.utah.gov/water-quality/municipal-separate-storm-sewer-system-ms4s-permits-updes-permits

4.2.4.4.4. Co-Permittees may utilize an electronic site inspection tool in place of up to one-half of on-site MS4 inspections at a construction site provided that the Co-Permittee demonstrates to the Director that the tool meets the requirements of Part 4.2.4.

4.2.4.4.5. Based on site inspection findings, the Co-Permittee shall take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure compliance in accordance with the Co-Permittee's enforcement strategy. These follow-up and enforcement actions shall be tracked and documented.

4.2.4.5. The Co-Permittee shall ensure that all staff whose primary job duties are related to implementing the construction storm water program, including permitting, SWPPP

review, construction site inspections, and enforcement, are annually trained to conduct these activities. The training can be conducted by the MS4 or outside training can be attended. Such training must extend to third-party inspectors and plan reviewers as well. The Co-Permittee shall ensure that all new hires are trained within 60 days of hire and annually thereafter, at a minimum. Follow-up training shall be provided as needed to address changes in procedures, methods or staffing. The training records to be kept-include dates, activities or course descriptions, and names and positions of staff in attendance.

4.2.4.6. Co-Permittees shall implement a procedure to maintain records of all projects disturbing greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre. Co-Permittees shall keep records which include but are not limited to, site plan reviews, SWPPPs, inspections and enforcement actions including verbal warnings, stop work orders, warning letters, notices of violation, and other enforcement records. Co-Permittees must keep records of these projects for five years or until construction is completed, whichever is longer.

4.2.5. Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management)

All Co-Permittees shall revise as necessary, implement and enforce a program to address post-construction storm water runoff to the MS4 from private and public new development and redevelopment construction sites meeting the thresholds below. The water quality considerations of this minimum control measure do not replace or substitute for water quantity or flood management requirements implemented on the local level for new development or redevelopment sites. The water quality controls may be incorporated into the design of structures intended for flow control; or water quality control may be achieved with separate control measures. The program must apply to private and public development sites.

The minimum performance measures are:

4.2.5.1. Post-construction Controls. The Co-Permittee's new development/redevelopment program must have requirements or standards to ensure that any storm water controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality. BMPs must be selected that address pollutants known to be discharged or anticipated to be discharged from the site.

4.2.5.1.1. The Co-Permittee's new development/redevelopment program should include non-structural BMPs such as requirements and standards to minimize development in areas susceptible to erosion and sediment loss; to minimize the disturbance of native soils and vegetation; to preserve areas that provide important water quality benefits; to implement measures for flood control; and to protect the integrity of natural resources and sensitive areas.

4.2.5.1.2. Retention Requirement. Each Co-Permittee must develop and define a specific hydrologic method or methods for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs in their jurisdiction and to facilitate plan review.

By **July 1, 2020**, new development projects that disturb land greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre must manage rainfall on-site, and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event or a predevelopment hydrologic condition, whichever is less. This objective must be accomplished by the use of practices that are designed, constructed, and maintained to infiltrate, evapotranspire and/or harvest and reuse rainwater. The 80th percentile rainfall event is the event whose precipitation total is greater than or equal to 80 percent of all storm events over a given period of record.

By **July 1, 2020**, redevelopment projects that disturb greater than or equal to one acre, including projects less than an acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre must provide a site-specific and project-specific plan aimed at net gain to onsite retention or a reduction to impervious surface to provide similar water quality benefits. If a redevelopment project increases the impervious surface by greater than 10%, the project shall manage rainfall on-site, and prevent the off-site discharge of the net increase in the volume associated with the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event. This objective must be accomplished by the use of practices that are designed, constructed, and maintained to infiltrate, evapotranspire and/or harvest and reuse rainwater.

4.2.5.1.3. Low Impact Development Approach. By **July 1, 2020**, the program shall include a process which ***requires*** the evaluation of a Low Impact Development (LID) approach for all projects subject to the requirements in 4.2.5.1.2. A LID approach promotes the implementation of BMPs that allow storm water to infiltrate, evapotranspire or harvest and use storm water on site to reduce runoff from the site and protect water quality.

Guidance for implementing LID can be found in DWQ's LID controls which are appropriate for use in the State of Utah can be found in *A Guide to Low Impact Development within Utah* (the Guide), available on DWQ's website.

Co-Permittees must allow for use of a minimum of five LID practices from the list in Appendix C of the Guide. If a Co-Permittee has not adopted specific LID practices from Appendix C, any LID approach that meets 4.2.5.1.2 and is feasible may be used to meet this requirement.

4.2.5.1.4. Since 2010, rainwater harvesting is legal in the State of Utah. Depending on the volume of rainwater collected and stored for beneficial use, the Co-Permittee must meet the requirements of the Utah Division of Water Rights to harvest rainwater found on their website: http://waterrights.utah.gov/forms/rainwater.asp.

4.2.5.1.5. Feasibility. If meeting the retention standards described in Part 4.2.5.1.2 is infeasible, a rationale shall be provided for the use of alternative design criteria. The new or redevelopment project must document and quantify that infiltration, evapotranspiration, and rainwater harvesting have been used to the maximum extent feasible and that full employment of these controls are infeasible due to constraints. LID infeasibility may be due to one or more of the following conditions: high

groundwater, drinking water source protection areas, soil conditions, slopes, accessibility, excessive costs, or others.

Guidance for assessing and documenting site conditions can be found in DWQ's "A Guide to Low Impact Development within Utah" Appendix B "Storm Water Quality Report Template" located on the DWQ website at: https://documents.deq.utah.gov/water-quality/stormwater/updes/DWQ-2019-000161.pdf.
A MS Word version can be found on DWQ's website at: https://documents.deq.utah.gov/water-quality/stormwater/DWQ-2018-013750.docx.

4.2.5.2. Regulatory Mechanism. Develop and adopt an ordinance or other regulatory mechanism that requires long-term post-construction storm water controls at new development and redevelopment sites. The ordinance or other regulatory mechanism shall apply, at a minimum, to new development and redevelopment sites that discharge to the MS4 and that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre. The ordinance or other regulatory mechanism must require BMP selection, design, installation, operation and maintenance standards necessary to protect water quality and reduce the discharge of pollutants to the MS4. The Co-Permittee shall implement an enforcement strategy and implement the enforcement provisions of the ordinance or other regulatory mechanism. The Co-Permittee's ordinance or other regulatory mechanism must include an appeals process.

4.2.5.2.1. The Co-Permittee must include enforcement provisions in the ordinance or other regulatory mechanism, including procedures that include specific processes and sanctions to minimize the occurrence of, and obtain compliance from, chronic and recalcitrant violators which must include appropriate, escalating enforcement procedures and actions.

4.2.5.2.2. The Co-Permittee must maintain documentation on how the requirements of the ordinance or other regulatory mechanism will protect water quality and reduce the discharge of pollutants to the MS4. Documentation must include:

- How long-term storm water BMPs were selected;
- The pollutant removal expected from the selected BMPs; and
- The technical basis which supports the performance claims for the selected BMPs.

All Co-Permittees shall adopt and implement SOPs or similar type of documents for site inspection and enforcement of post-construction storm water control measures. These procedures shall be designed to achieve adequate ongoing long-term operation and maintenance of approved storm water control measures.

4.2.5.2.3. The ordinance or other regulatory mechanism shall include provisions for post-construction access for Co-Permittees to inspect storm water control measures on private properties that discharge to the MS4 to ensure that adequate maintenance is being performed. The ordinance or other regulatory mechanism may, in lieu of requiring that the Co-Permittee's staff inspect and maintain storm water controls on private property, require private property owner/operators or qualified third parties to

conduct maintenance and provide annual certification that adequate maintenance has been performed and the structural controls are operating as designed to protect water quality. If the Co-Permittee requires a maintenance agreement addressing maintenance requirements for any control measures installed on site the agreement shall allow the Co-Permittee to conduct oversight inspections of the storm water control measures and also account for transfer of responsibility in leases and/or deeds. The agreement must also allow the Co-Permittee to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator as needed.

4.2.5.2.4. Permanent structural BMPs shall be inspected at least once during installation by qualified personnel. Prior to closing out a construction permit, the Co-Permittee shall verify that long-term BMPs were constructed as designed.

4.2.5.2.5. Inspections and any necessary maintenance must be conducted at least every other year or as necessary to maintain functionality of the control by either the Co-Permittee or, if applicable, the property owner/operator. On sites where the property owner/operator is conducting maintenance, the Co-Permittee must inspect those storm water control measures at least once every five years, or more frequently as determined by the Co-Permittee to verify and ensure that adequate maintenance is being performed. Following an inspection, if there is an observed failure of a facility to perform as designed, the Co-Permittee must document its findings in an inspection report which includes the following:

- Inspection date;
- Name and signature of inspector;
- Project location
- Current ownership information
- A description of the condition of the storm water control measure including the quality of: vegetation and soils; inlet and outlet channels and structures; catch basins; spillways; weirs, and other control structures; and sediment and debris accumulation in storage as well as in and around inlet and outlet structures;

Specific maintenance issues or violations found that need to be corrected by the property owner or operator along with deadlines and re-inspection dates.

4.2.5.3. Plan Review. Co-Permittees shall:

4.2.5.3.1. Adopt and implement procedures for site plan review which incorporate consideration of water quality impacts. The procedures shall apply through the life of the project from conceptual design to project closeout.

4.2.5.3.2. Review post-construction plans for, at a minimum, all new development and redevelopment sites that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre, to ensure that the plans include long-term storm water management measures that meet the requirements of this minimum control measure.

4.2.5.4. Inventory. The Co-Permittee shall maintain an inventory of all post-construction structural storm water control measures installed and implemented at new

development and redevelopment sites that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre. This inventory must include both public sites and private sector sites that were developed since the Co-Permittee obtained coverage by this permit or the date that post-construction requirements came into effect, whichever is later; and are located within the Co-Permittee's service area.

4.2.5.4.1. Each entry to the inventory must include basic information on each project, such as project's name, owner's name and contact information, location, start/end date, etc. In addition, inventory entries shall include the following for each project:

- Short description of each storm water control measure (type, number, design or performance specifications);
- Short description of maintenance requirements (frequency of required maintenance and inspections); and
- Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

4.2.5.4.2. Based on inspections conducted pursuant to Part 4.2.5.2.5, the Co-Permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site.

4.2.5.5. Training. Co-Permittees shall ensure that all staff involved in post-construction storm water management including those that conduct plan review, annual maintenance inspections, and enforcement, receive appropriate training.. Training shall be provided or made available for staff in the fundamentals of long-term storm water management through the use of structural and non-structural control methods. The Co-Permittees must ensure that all new hires are trained within 60 days of hire and annually thereafter, at a minimum. Follow-up training shall be provided as needed to address changes in procedures, methods or staffing.

4.2.6. Pollution Prevention and Good Housekeeping for Municipal Operations

All Co-Permittees must implement a program for Co-Permittee-owned or operated facilities, operations and structural storm water controls that includes SOPs, pollution prevention BMPs, storm water pollution prevention plans or similar type of documents and a training component that have the ultimate goal of preventing or reducing the runoff of pollutants to the MS4 and waters of the state. All components of the program shall be included in the SWMP document and must identify the department responsible for performing each activity described in this section. The Co-Permittee shall develop an inventory of all such Co-Permittee-owned or operated facilities. The Co-Permittee must review this inventory annually and update as necessary.

4.2.6.1. As a minimum requirement, the Co-Permittees shall develop and keep current a written inventory of all the following potential "high priority" facilities that are owned or operated by the Co-Permittee and all the storm water controls that may include but is not limited to:

- Composting facilities
- Equipment storage and maintenance facilities
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Landscape maintenance facilities on municipal property
- Materials storage yards
- Pesticide storage facilities
- Public buildings, including libraries, police stations, fire stations, municipal buildings, and similar Co-Permittee-owned or operated buildings
- Public parking lots
- Public golf course maintenance facilities
- Public swimming pool maintenance facilities
- Public works yards
- Recycling facilities
- Salt storage facilities
- Solid waste handling and transfer facilities
- Street repair and maintenance facilities and or shed sites
- Vehicle storage and maintenance yards
- Co-Permittee-owned and/or maintained structural storm water controls

4.2.6.2. All Co-Permittees shall assess the written inventory of Co-Permittee-owned or operated facilities, operations and storm water controls identified in Part 4.2.6.1. and make a list of common pollutants that may originate from these facilities and how to prevent them from entering the storm water system. A description of the assessment process and findings shall be included in the SWMP document.

4.2.6.3. Based on the assessment required in Part 4.2.6.2., the Co-Permittee shall identify as "high-priority" those facilities or operations that have:

1. pollutants stored at the site,
2. the identification of improperly stored materials,
3. potential pollutant-generating activities performed outside (e.g. changing automotive fluids)
4. close proximity upstream to fresh water and water bodies, including but not limited to streams, canals, rivers, ponds and lakes,
5. potential discharge of pollutant(s) of concern to impaired water(s).

The Co-Permittee shall provide water quality control measures and BMPs at all high-priority sites designed to target the specific pollutants generated onsite, and/or the pollutants associated with the impaired waters. The Co-Permittee shall monitor the control measures and BMPs regularly to verify that the BMPs are functioning. Control measures, BMPs, and monitoring schedules shall be specified in the Co-Permittee's SWMP.

4.2.6.4. The Co-Permittee shall update the SWMP to include a list of "high priority" facilities according to 4.2.6.3 and prepare a Storm Water Pollution Prevention Plan (SWPPP) for each facility within 180 days from the effective date of this permit. Each "high priority" facility shall implement a SWPPP outlining measure to prevent pollutants to enter the storm drain system from each of these facilities. The SWPPP shall include a site map showing the following information:

- Property boundaries
- Buildings and impervious surfaces;
- Directions of storm water flow (use arrows);
- Locations of structural control measures;
- Location and name of the nearest defined drainage(s) which could receive runoff from the facility, whether it contains water or not;
- Locations of all storm water conveyances including ditches, pipes, basins, inlets, and swales;
- Locations where the following activities are exposed to storm water:
    - Fixed fueling operations;
    - Vehicle and equipment maintenance and/or cleaning areas;
    - Brine making areas;
    - Loading/unloading areas;
    - Materials or waste storage or disposal areas;
    - Liquid storage tanks;
    - Process and equipment operating areas;
- Locations where significant spills or leaks have occurred;
- Locations of all visual storm water monitoring points;
- Locations of storm water inlets and outfalls, with a unique identification code for each outfall and an approximate outline of the areas draining to each outfall
- Locations of all non-storm water discharges;
- Locations of sources of run-on to your site from adjacent property.

4.2.6.5. The following inspections shall be conducted at "high priority" Co-Permittee-owned or operated facilities:

4.2.6.5.1. Monthly visual inspections: The Co-Permittee must perform monthly visual inspections of "high priority" facilities and related storm water outfalls in accordance with the developed SOPs to verify the performance of the BMPs and all other systems designed and placed to eliminate any pollutant discharge. The monthly inspections shall be tracked in a log for every facility and records kept with the SWMP document. The inspection log should also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

4.2.6.5.2. Semi-Annual comprehensive inspections: At least twice per year, a comprehensive inspection of "high priority" facilities, including all storm water controls, must be performed, with specific attention paid to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar pollutant-generating areas. The semi-annual inspection results shall be documented and records kept with the SWMP document. This inspection shall be done in accordance with the developed SOPs. An inspection report shall also include any identified deficiencies and the corrective actions taken to remedy the deficiencies.

4.2.6.5.3. Annual visual observation of storm water discharges: At least once per year, the Co-Permittee shall visually observe the quality of the storm water discharges from the "high priority" facilities during the first half hour of a measurable storm (unless climate conditions preclude doing so, in which case the Co-Permittee shall attempt to evaluate the discharges once during the wet season). Any observed problems (e.g., color, foam, sheen, turbidity) that can be associated with pollutant sources or controls shall be remedied to prevent discharge to the storm drain system. Visual observations shall be documented and records kept with the SWMP document. This inspection must be done in accordance with the developed SOPs. The inspection report must also include any identified deficiencies and the corrective actions taken to remedy the deficiencies.

4.2.6.6. Co-Permittees shall develop and implement SOPs to protect water quality at each of the facilities owned or operated by the Co-Permittee and/or activities conducted by the Co-Permittee including but not limited to those listed below:

- Buildings and facilities;
- Material storage areas, heavy equipment storage areas and maintenance areas;
- Parks and open space;
- Vehicle and Equipment;
- Roads, highways, and parking lots; and
- Storm water collection and conveyance system.

4.2.6.6.1. SOPs shall address the following practices to ensure they are protective of water quality:

- Use, storage and disposal of chemicals;
- Storage of salt, sand, gravel, landscaping materials, asphalt and other materials;
- Waste and trash management;
- Cleaning, washing, painting and other maintenance activities including cleaning of maintenance equipment, building exteriors, trash containers;
- Sweeping roads and parking lots;
- Proper application, storage, and disposal of fertilizer, pesticides, and herbicides including minimization of use;

- Lawn maintenance and landscaping activities including proper disposal of lawn clipping and vegetation;
- Proper disposal of pet wastes;
- Vehicle maintenance and repair activities including use of drip pans and absorbents under or around leaky vehicles and equipment;
- Vehicle/equipment storage including storing indoors where feasible;
- Vehicle fueling including placing fueling areas under cover in order to minimize exposure where feasible;
- Road and parking lot maintenance, including pothole repair, pavement marking, sealing and repaving;
- Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas;
- Right-of-way maintenance, including mowing, herbicide and pesticide application;
- Municipally-sponsored events such as large outdoor festivals, parades or street fairs;
- Regular inspection, cleaning, and repair of storm water conveyance and structural storm water controls; and
- Any activities or operations not listed above that would reasonably be expected to discharge contaminated runoff.

4.2.6.6.2. SOPs must include a schedule for Co-Permittee owned road and parking lot sweeping and storm drain system maintenance including regular inspection, cleaning, and repair of catch basins, storm water conveyance pipes, ditches and irrigation canals, culverts, structural storm water controls, and structural runoff treatment and/or flow control facilities. Co-Permittees must prioritize sweeping and storm sewer system maintenance, with the highest priority areas being maintained at the greatest frequency. Priorities should be driven by water quality concerns, the condition of the receiving water, the amount and type of material that typically accumulates in an area, or other location-specific factors.

4.2.6.6.3. Co-Permittees must ensure and document proper disposal methods of all waste and wastewater removed during cleaning and maintenance of the storm water conveyance system. These disposal methods apply to, but are not limited to, street sweeping and catch basin cleaning. Materials removed from the MS4 should be dewatered in a contained area and discharged to the local sanitary sewer (with approval of local authorities) where feasible. The solid material will need to be stored and disposed of properly to avoid discharge during a storm event. Any other treatment and disposal measures shall be reviewed and approved by the *Director*. Some materials removed from storm drains and open channels may require special handling and disposal, and may not be authorized to be disposed of in a landfill. The solid material shall be stored and disposed of in accordance to federal, state and local laws.

4.2.6.6.4. Co-Permittees must ensure that vehicle, equipment and other wash waters are not discharged to the MS4 or waters of the state. This Permit strictly prohibits such discharges. The Co-Permittee must minimize discharges to waters of the state that are associated with snow disposal and melt.

4.2.6.6.5. The Co-Permittee shall develop a spill prevention plan in coordination with the local fire department.

4.2.6.6.6. All Co-Permittees must maintain an inventory of all floor drains inside all Co-Permittee-owned or operated buildings. The inventory shall be kept current. The Co-Permittee shall ensure that all floor drains discharge to appropriate locations.

4.2.6.7. The Co-Permittee shall be responsible for ensuring, through contractually-required documentation and/or periodic site visits that contractors performing O&M activities for the Co-Permittee are using appropriate storm water controls and following the standard operating procedures, storm water control measures, and good housekeeping practices of the Co-Permittee.

4.2.6.8. The Co-Permittee must develop and implement a process to assess the water quality impacts in the design of all new flood management structural controls that are associated with the Co-Permittee or that discharge to the MS4. This process shall include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting project objectives. A description of this process shall be included in the SWMP document.4.2.6.8.1 Existing flood management structural controls shall be assessed to determine whether changes or additions should be made to improve water quality. A description of this process and determinations should be included in the SWMP document.

4.2.6.9. The Co-Permittee must develop a plan to retrofit existing developed sites that the Co-Permittee owns or operates that are adversely impacting water quality. The retrofit plan must be developed to emphasize controls that infiltrate, evapotranspire or harvest and use storm water discharges. The plan shall include a ranking of retrofit sites based on the following criteria:

- Proximity to waterbody
- Status of waterbody to improve impaired water bodies and protect unimpaired water bodies
- Hydrologic condition of the receiving waterbody
- Proximity to sensitive ecosystem or protected area
- Any upcoming sites that could be further enhanced by retrofitting storm water controls

4.2.6.10. Co-Permittees shall require that all employees, contracted staff, and other responsible entities that have primary operation, or maintenance job functions that are likely to impact storm water quality receive annual training that shall address the importance of protecting water quality, the requirements of this Permit, operation and maintenance requirements, inspection procedures, ways to perform their job activities to prevent or minimize impacts to water quality, SOPs and SWPPPs for the various Co-Permittee-owned or operated facilities and procedures for reporting water quality concerns, including potential illicit discharges. Training records must be kept and shall include dates, activities or course descriptions, and names and positions of staff in attendance. Co-Permittees shall document and maintain records of the training provided and the staff in attendance. The Co-Permittees must ensure that all new hires are trained within 60 days of hire and annually thereafter, at a minimum. Follow-up training shall be provided as needed to address changes in procedures, methods or staffing.

4.3. Industrial and High Risk Runoff (Phase I Co-Permittee Only)

Phase I Co-Permittee (Salt Lake County) shall continue to develop and implement an inspection and oversight program to monitor and control pollutants in storm water discharges to the MS4 from industrial facilities. Phase I regulations specify that several key elements shall be included in Phase I storm water management programs. These elements include: adequate legal authority to require compliance and inspect sites, inspection of priority industrial and commercial facilities, establishing control measure requirements for facilities that may pose a threat to water quality, and enforcing storm water requirements. If the Phase I Co-Permittee does not have industrial or high risk runoff in their jurisdiction, Part 4.3 will not be required.

The following permit requirements apply to only Phase I Co-Permittee (Salt Lake County):

4.3.1. The Phase I Co-Permittee must maintain an inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could discharge pollutants in storm water to the MS4. The inventory shall be updated annually, at a minimum, and made available for review by the *Director* upon request.

4.3.1.1. The inventory must include the following minimum information for each industrial and commercial site/source:

- Name
- Address
- Physical location of storm drains and other conveyance structures receiving discharge
- Name of receiving water
- Pollutants potentially generated by the site/source
- Identification of whether the site/source is (1) tributary to an impaired water body segment (i.e., whether it is listed under Section 303(d) of the *Clean Water Act*) and (2) whether it generates pollutants for which the water body segment is impaired.
- A narrative description including the standard industrial classification (SIC) codes, which best reflects the principal products or services provided by each facility.

4.3.1.2. At a minimum, the following sites/sources shall be included in the inventory:

<u>Commercial Sites/Sources</u>:

- Automobile and other vehicle body repair or painting
- Automobile (or other vehicle) parking lots and storage facilities
- Automobile repair, maintenance, fueling, or cleaning
- Building material retailers and storage
- Cement mixing or cutting
- Eating or drinking establishments (e.g., restaurants), including food markets
- Equipment repair, maintenance, fueling, or cleaning
- Golf courses, parks and other recreational areas/facilities
- Landscaping
- Masonry

- Mobile automobile or other vehicle washing
- Mobile carpet, drape or furniture cleaning
- Nurseries and greenhouses
- Painting and coating
- Pest control services
- Pool and fountain cleaning
- Portable sanitary services
- Power washing services
- Retail or wholesale fueling

Industrial Sites/Sources

- Industrial Facilities, as defined at 40 CFR 122.26(b)(14), including those subject to the Multi Sector General Permit or individual UPDES permit
- Facilities subject to Title III of the Superfund Amendments and Reauthorization Act (SARA)
- Hazardous waste treatment, disposal, storage and recovery facilities

4.3.1.3. All other commercial or industrial sites/sources tributary to an impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired.

4.3.1.4. All other commercial or industrial sites/sources that the Co-Permittee determines may contribute a significant pollutant load to the MS4 including those that the Co-Permittee may have a history of past water quality problems.

4.3.2. The Co-Permittee shall require industrial and commercial facilities listed in the inventory included in Part 4.3.1.2. to select, install, implement, and maintain storm water control measures as necessary to minimize storm water pollution.

4.3.2.1. The Co-Permittee is required to notify industrial and commercial sites of any control measure requirements pertaining to their site and their responsibility to implement and comply with the requirements.

4.3.2.2. The Co-Permittee may need to require industrial and commercial facilities that discharge into impaired water bodies to implement additional controls as necessary to prevent the discharge of pollutants of concern.

4.3.3. The Co-Permittee shall prioritize all facilities on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of concern, proximity to a water body, and violation history of the facility.

4.3.3.1. The Co-Permittee shall describe in its SWMP document the process for prioritizing facilities.

4.3.4. The Co-Permittee is required to conduct inspections of all industrial and commercial facilities at least once during this Permit term with the highest priority facilities receiving more frequent inspections.

4.3.4.1. For facilities with no exposure of commercial or industrial activities to storm water, no inspections are required. However, the Co-Permittee shall continue to track these facilities for significant change in the exposure of their operations to storm water.

4.3.4.2. All industrial and commercial facility inspections shall at a minimum:

- Evaluate the facility's compliance with this permit's Part 4.3.2. requirement to select, design, install, and implement storm water control measures;
- Conduct a visual observation for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to storm water;
- Verify whether the facility is required to be authorized under the UPDES Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities and whether the facility has in fact obtained such permit coverage;
- Evaluate the facility's compliance with any other relevant local storm water requirements;

4.3.4.3. At a minimum, the Co-Permittee shall document the following for each inspection:

- The inspection date and time;
- The name(s) and signature(s) of the inspectors;
- Weather information and a description of any discharges occurring at the time of the inspection;
- Any previously unidentified discharges of pollutants from the site;
- Any control measures needing maintenance or repairs;
- Any failed control measures that need replacement;
- Any incidents of noncompliance observed; and
- Any additional control measures needed to comply with this permit's requirements.

4.3.4.4. Inspection findings must be tracked to ensure inspections are conducted at a frequency consistent with the prioritization process required in Part 4.3.3.1.

4.3.5. The Co-Permittee must ensure that all necessary follow up inspections and enforcement activities are conducted as necessary to require implementation and maintenance of all storm water control measures.

4.3.6. The Co-Permittee must ensure that all staff whose primary job duties are implementing the industrial storm water program are trained annually, at a minimum, to conduct facility inspections. All new hires must be trained within 60 days upon hire. The training must cover what is required under this permit in terms of storm water control measures, the requirements of the Multi-Sector General Permit for Discharges Associated with Industrial Activities or other related local requirements, the Co-Permittee's site inspection and documentation protocols, and enforcement procedures. Co-Permittees shall document and maintain records of the training provided and the staff the staff in attendance.

4.4. Sharing Responsibility

4.4.1. Implementation of one or more of the six minimum measures may be shared with another entity, or the entity may fully take over the measure. A Co-Permittee may rely on another entity only if:

4.4.2. The other entity, in fact, implements the control measure;

4.4.3. The particular control measure, or component of that measure, is at least as stringent as the corresponding Permit requirement; and

4.4.4. The other entity agrees to implement the control measure through a written agreement. This obligation shall be maintained as part of the description given in the Co-Permittee's SWMP document. If the other entity agrees to report on the minimum control measure, the Co-Permittee must supply the other entity with the reporting requirements contained in Part 5.6. of this Permit. If the other entity fails to implement the control measure, then the Co-Permittee remains liable for any discharges due to that failure to implement.

4.5. Reviewing and Updating Storm Water Management Programs

4.5.1. Storm Water Management Program Review*:* All Co-Permittees must conduct, at a minimum, an annual review of the SWMP document in conjunction with preparation of the annual report required in Part 5.6.

4.5.2. *Storm Water Management Program Update:* A Co-Permittee may change the SWMP document during the life of the Permit in accordance with the following procedures:

4.5.2.1. Changes adding (but not subtracting or replacing) components, controls, or requirements to the SWMP document may be made at any time upon written notification to the *Director*.

4.5.2.2. Changes replacing an ineffective or unfeasible BMP specifically identified in the SWMP document with an alternative BMP may be adopted at any time, provided the analysis is clearly outlined and subsequently approved by the *Director*. An analysis should include:

4.5.2.2.1. For Phase I Co-Permittee, Salt Lake County, a review of monitoring data, any changes in monitoring methods and parameters, considerations for how to change monitoring to improve information gathered from data, considerations about what kind of information is most useful for assessing storm water, and another look at what or how assessments can be made to track water quality as impacted by storm water.

4.5.2.3. Changes replacing an ineffective or unfeasible BMP specifically identified in the SWMP document with an alternate BMP may be adopted at any time, provided the analysis is clearly outlined and subsequently approved by the *Director*. An analysis must include:

4.5.2.3.1. An explanation of why the BMP is ineffective or infeasible,

4.5.2.3.2. Expectations or report on the effectiveness of the replacement BMP, and

4.5.2.3.3. An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced, or has achieved those goals.

4.5.3. Change requests or notifications must be made in writing and signed in accordance with Part 6.8.

4.5.4. Change requests or notifications will receive confirmation and approval or denial in writing from the *Director*.

4.5.5. Storm Water Management Program Updates required by the *Director:* The *Director* may require changes to the SWMP as needed to:

4.5.5.1. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

4.5.5.2. Include more stringent requirements necessary to comply with new Federal regulatory requirements; or

4.5.5.3. Include such other conditions deemed necessary by the *Director* to comply with the goals and requirements of the *Clean Water Act*.

5.0 Narrative Standard, Monitoring, Recordkeeping and Reporting

5.1. Narrative Standard

It shall be unlawful, and a violation of this Permit, for the Co-Permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste, or conditions which produce undesirable aquatic life or which produces objectionable tastes in edible aquatic organisms; or concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures.

5.2. General Monitoring and Sampling Requirements

5.2.1. Wet Weather Monitoring: Co-Permittees with jurisdictions within Phase I areas must implement a wet weather monitoring program that is appended to this Permit in Appendix III as required by the *Director*. The program may be modified provided the modification (s) meets the requirements of this section and Part 1.6.4. The Co-Permittee must meet the objectives of the monitoring program as listed below:

5.2.1.1. Assess storm water impacts to in-stream water quality, hydrology, geomorphology, habitat, and biology;

5.2.1.2. Provide data to estimate annual cumulative pollutant loadings from the MS4;

5.2.1.3. Estimate event mean concentrations and pollutants in discharges from major outfalls;

5.2.1.4. Identify and prioritize portions of the MS4 requiring additional controls, and;

5.2.1.5. Identify water quality improvements or degradation.

5.2.2. Phase I Co-Permittee, Salt Lake County, must select monitoring locations as needed to best characterize the purpose of the objective listed above and be representative of the area covered by the Permit and be within the Co-Permittee's jurisdiction. If the Phase I Co-Permittee does not have jurisdiction over facilities that will meet the purpose of the objectives outlined above, wet weather monitoring will not be required.

5.2.2.1. If required, the latest version of Salt Lake County's *Sampling Plan for Representative Storm Monitoring* must be placed in Appendix III within 90 days of issuance of this Permit. The *Sampling Plan for Representative Storm Monitoring* must attempt to address monitoring of a representative storm for the area.

5.2.2.2. Phase I Co-Permittee, Salt Lake County, may modify the sampling plan and submit the modified plan for approval by the *Director*. All modifications to the sampling plan must be approved by the *Director*.

5.2.2.3. The minimum monitoring to be conducted each year must be a planned wet weather monitoring frequency of twice a year, subject to the occurrence of appropriate storm

events. If the Phase I Co-Permittee is not able to accomplish the planned monitoring frequency the Phase I Co-Permittee must submit detailed reasons and weather data showing why it was not possible.

5.2.3. Dry Weather Screening: Phase I Co-Permittee, Salt Lake County, must continue its dry weather screening efforts and include the latest version of its *Sampling Plan for Dry Weather Screening* in Appendix III and submitted to the *Director* within 90 days of issuance of this Permit.

5.2.3.1. The *Sampling Plan for Dry Weather Screening* must include the screening methodology used for screening all outfalls of the MS4 at least once during the permit term. The inventory of outfalls and associated maps must be kept current. Phase I Co-Permittee, Salt Lake County, must also comply with the requirements of Part 4.2.3.3.2 of this Permit and address priority areas identified in Part 4.2.3.3.1 to detect illicit discharges within one year of receiving coverage from this Permit, and field assessing an additional 20 percent of the identified high priority waters of the state or other high priority area each year thereafter.

5.2.4. Phase I Co-Permittee, Salt Lake County, must at a minimum, annually train all staff involved with Wet Weather Monitoring and Dry Weather Screening. The Co-Permittee must document and maintain records of the training provided and the staff in attendance.

5.3. Analytical Monitoring

Phase II Co-Permittees are not required to conduct analytical monitoring (see definition in Part 7.3) during the effective term of this Permit, with the following exceptions:

5.3.1. Water quality sampling may be required for compliance with TMDLs, pursuant to Part 3.1. of this Permit.

5.3.2. Sampling or testing may be required for characterizing illicit discharges pursuant to Parts 4.2.3.4., 4.2.3.5., and 4.2.3.5.1 of this Permit.

5.3.3. In the event that the Phase II MS4 elects to conduct analytical monitoring as part of its Storm Water Management Program, the Co-Permittee is required to comply with Part 6.18. of this Permit.

5.4. Non-analytical Monitoring

5.4.1. Non-analytical monitoring (see definitions in Part 7.0) such as visual dry weather screening is required to comply with Part 4.2.3.3.2 of this Permit.

5.5. Record keeping

5.5.1. Co-Permittees must keep all supplementary documents associated with this Permit (e.g., Storm Water Management Program (SWMP) document, SWMP

Implementation Schedule) current and up to date to achieve the purpose and objectives of the required document.

5.5.2. All modifications to supplementary documents must be submitted to the *Director* in accordance with Parts 4.5. and 6.8.

5.5.3. The *Director* may at any time make a written determination that parts or all of the supplementary documents are not in compliance with this Permit, wherein the Co-Permittee shall make modifications to these parts within a time frame specified by the *Director*.

5.5.4. The Co-Permittee must retain all required plans, records of all programs, records of all monitoring information, copies of all reports required by this Permit, and records of all other data required by or used to demonstrate compliance with this Permit, for at least five years from the date of the record. This period may be explicitly modified by alternative provisions of this Permit or extended by request of the *Director* at any time.

5.5.5. The Co-Permittee must make records, including the Notice of Intent (NOI) and the SWMP document, available to the public if requested.

5.6. Reporting

5.6.1. Each Co-Permittee must submit an annual report to the *Director* by October 1 for the reporting period of July 1 to June 30 of each year of the Permit term.

5.6.2. The report must be submitted using the report form provided on the *Division's* website at: https://deq.utah.gov/legacy/permits/water-quality/utah-pollutant-discharge-elimination-system/docs/2009/07Jul/MS4_UT_09_annual_report_form.pdf

5.6.2.1. The Phase I Co-Permittee, Salt Lake County must submit a summary of five years of wet weather monitoring and assess trends and make conclusions (This timeframe takes into account the previous Permit conditions and reporting requirements, some of the data was required by the previous Permit term).

5.6.3. Each Co-Permittee must sign and certify the annual report in accordance with Part 6.8.

5.6.4. Signed copies of the annual report and all other reports required herein, must be submitted directly to the DWQ electronic document system at: https://deq.utah.gov/water-quality/water-quality-electronic-submissions

5.7. Legal Authority

Each Co-Permittee must ensure legal authority exists to control discharges to and from those portions the MS4 over which it has jurisdiction. This legal authority may be a combination of statute, ordinance, Permit, contract, order or inter-jurisdictional agreements with Co-Permittees with existing legal authority to:

5.7.1. Control the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity (including construction activity);

5.7.2. Effectively prohibit illicit and non-storm water discharges through ordinance, or other regulatory mechanism, into the MS4 and must be able to implement appropriate enforcement procedures and actions;

5.7.3. Control the discharge of spills and the dumping or disposal of materials other than storm water into the MS4;

5.7.4. Control through interagency agreements among Co-Permittees the contribution of pollutants from one portion of the MS4 to another;

5.7.5. Require compliance with conditions in ordinances, permits, contract or orders; and

5.7.6. Conduct all inspection, surveillance and monitoring activities and procedures necessary to determine compliance with conditions in this Permit.

6.0 Standard Permit Conditions

6.1. Duty to Comply

The Co-Permittee must comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of the *Act* and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of Permit coverage. The Co-Permittee shall give advance notice to the *Director* of any planned changes in the Permitted facility or activity, which may result in noncompliance with Permit requirements.

6.2. Penalties for Violations of Permit Conditions

The *Act* provides that any person who violates a Permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates Permit conditions or the *Act* is subject to a fine not exceeding $25,000 per day of violation. Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding $50,000 per day.

6.3. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must apply for and obtain a new Permit. The application must be submitted at least **180 days** before the expiration date of this Permit. Continuation of expiring Permits must be governed by regulations promulgated at *UAC R317-8-5* and any subsequent amendments.

6.4. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce otherwise permitted activities in order to maintain compliance with the conditions of this Permit.

6.5. Duty to Mitigate

The Permittee must take all reasonable steps to minimize or prevent any discharge in violation of this Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

6.6. Duty to Provide Information

The Permittee must furnish to the *Director*, within a time specified by the *Director*, any information which the *Director* may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit.

The Permittee shall also furnish to the *Director*, upon request, copies of records required to be kept by this Permit.

6.7. Other Information

When the Permittee becomes aware that it failed to submit any relevant facts in a Permit application, or submitted incorrect information in a Permit application or any report to the *Director*, it shall promptly submit such facts or information.

6.8. Signatory Requirements

All notices of intent, storm water management programs, storm water pollution prevention plans, reports, certifications or information either submitted to the *Director* or that this Permit requires to be maintained by the Permittee, shall be signed, dated and certified as follows:

6.8.1. All Permit applications must be signed by either a principal executive officer or ranking elected official.

6.8.2. All reports required by the Permit and other information requested by the *Director* must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

6.8.2.1. The authorization is made in writing by a person described above and submitted to the *Director*, and,

6.8.2.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

6.8.2.3. Changes to authorization. If an authorization under *Part 6.8.2.* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *Part 6.8.2.* must be submitted to the *Director* prior to or together with any reports, information, or applications to be signed by an authorized representative.

6.8.3. *Certification*. Any person signing documents under this Part must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware

that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

6.9. Availability of Reports

Except for data determined to be confidential under the Government Records Access and Management Act (*see* particularly Utah Admin. Code § 63-2-309) and Utah Admin. Code § 19-1-3-6, all reports prepared in accordance with the terms of this Permit must be available for public inspection at the office of the Division. As required by the *Act*, Permit applications, Permits and effluent data shall not be considered confidential.

6.10. Penalties for Falsification of Reports

The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both. Utah Admin. Code § 19-5-115(4)

6.11. Penalties for Tampering

The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this Permit must, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

6.12. Property Rights

The issuance of this Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

6.13. Severability

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

6.14. Requiring a Different Permit

The *Director* may require the Co-Permittee authorized by this Permit to obtain an individual *UPDES* Permit. Any interested person may petition the *Director* to take action under this paragraph. The *Director* may require the Permittee authorized to discharge under this Permit to apply for an individual *UPDES* Permit only if the Permittee has been notified in writing that a

Permit application is required. This notice must include a brief statement of the reasons for this decision, an application form (as necessary), a statement setting a deadline for the Permittee to file the application, and a statement that on the effective date of the municipal *UPDES* Permit, coverage under this Permit shall automatically terminate. Permit applications must be submitted to the address of the Division shown in *Part 5.5.* of this Permit. The *Director* may grant additional time to submit the application upon request of the applicant. If the municipality fails to submit in a timely manner a municipal *UPDES* Permit application as required by the *Director*, then the applicability of this Permit to the Permittee is automatically terminated at the end of the day specified for application submittal.

6.15. State/Federal Laws

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by *UCA 19-5-117* and *Section 510* of the *Clean Water Act* or any applicable Federal or State transportation regulations.

6.16. Proper Operation and Maintenance

The Co-Permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit and with the requirements of the SWMP. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by the Permittee only when necessary to achieve compliance with the conditions of the Permit.

6.17. Monitoring and Records

6.17.1. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

6.17.2. The Permittee must retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of the reports required by this Permit, and records of all data used to complete the application for this Permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the *Director* at any time.

6.17.3. Records of monitoring information must include:

6.17.3.1. The date, exact place, and time of sampling or measurements;

6.17.3.2. The name(s) of the individual(s) who performed the sampling or measurements;

6.17.3.3. The date(s) and time(s) analyses were performed;

6.17.3.4. The name(s) of the individual(s) who performed the analyses;

6.17.3.5. The analytical techniques or methods used; and

6.17.3.6. The results of such analyses.

6.18. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under *Utah Admin. Code R317-2-10*, unless other test procedures have been specified in this Permit.

6.19. Inspection and Entry

The Permittee shall allow the *Director* or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

6.19.1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Permit;

6.19.2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this Permit; and

6.19.3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

6.19.4. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by law, any substances or parameters at any location.

6.20. Permit Actions

This Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Permit condition.

6.21. Storm Water-Reopener Provision

At any time during the duration (life) of this Permit, this Permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to waters of the state.

7.0 Definitions

Definitions related to this Permit and small municipal separate storm sewers (MS4s).

“40 CFR” refers to Title 40 of the Code of Federal Regulations, which is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal government.

"Act" means the *Utah Water Quality Act*.

“Analytical monitoring” refers to monitoring of water bodies (streams, ponds, lakes, etc.) or of storm water, according to UAC R317-2-10 and 40 CFR 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants,” or to State or Federally established protocols for biomonitoring or stream bio-assessments.

“Beneficial Uses” means uses of the waters of the state, which include but are not limited to: domestic, agricultural, industrial, recreational, and other legitimate beneficial uses.

“Best Management Practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

“CWA” means *The Clean Water Act of 1987*, formerly referred to as the Federal Water Pollution Control Act.

"Co-Permittee" means any operator of a regulated Small MS4 that is applying jointly with another applicant for coverage under this Permit. A Co-Permittee owns or operates a regulated Small MS4 located within or adjacent to another regulated MS4. A Co- Permittee is only responsible for complying with the conditions of this Permit relating to discharges from the MS4 the Co-Permittee owns or operates. See also 40 CFR 122.26(b)(1).

“Control Measure” refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the state.

“Common plan of development or sale” means one plan for development or sale, separate parts of which are related by any announcement, piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, plat, blueprint, contract, Permit application, zoning request, computer design, etc.), physical demarcation (including contracts) that identify the scope of the project. A plan may still be a common plan of development or sale even if it is taking place in separate stages or phases, is planned in combination with other construction activities, or is implemented by different owners or operators.

“Developed site” means a parcel or property that was previously in commercial, industrial, institutional, governmental, or residential use. A parcel that was previously in an agricultural use would not be considered to be a developed site.

“Director” means the director of the Utah Division of Water Quality, otherwise known as the Executive Secretary of the Utah Water Quality Board.

“Division” means the Utah Division of Water Quality.

"Discharge" for the purpose of this Permit, unless indicated otherwise, refers to discharges from the Municipal Separate Storm Sewer System (MS4).

"Dry weather screening" is monitoring done in the absence of storm events to discharges representing, as much as possible, the entire storm drainage system for the purpose of obtaining information about illicit connections and improper dumping.

“Escalating enforcement procedures” refers to a variety of enforcement actions in order to apply as necessary for the severity of the violation and/or the recalcitrance of the violator.

“Entity” means a governmental body or a public or private organization.

"EPA" means the United States Environmental Protection Agency.

“General Permit” means a Permit which covers multiple dischargers of a point source category within a designated geographical area, in lieu of individual Permits being issued to each discharger.

“Ground water” means water in a saturated zone or stratum beneath the surface of the land or below a surface water body.

“High quality waters” means any water, where, for a particular pollutant or pollutant parameter, the water quality exceeds that quality necessary to support the existing or designated uses, or which supports an exceptional use.

"Illicit connection" means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

"Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a UPDES Permit (other than the UPDES Permit for discharges from the municipal separate storm sewer) or to waters of the state.

“Impaired waters” means any segment of surface waters that has been identified by the *Director* as failing to support classified uses. The Division periodically compiles a list of such waters known as the 303(d) List.

“Large MS4” *Large municipal separate storm sewer system* means all municipal separate storm sewers that are located in an incorporated place with a population of 250,000 or more as determined by the current Decennial Census by the Bureau of the Census.

“Low Impact Development” (LID) is an approach to land development (or re-development) that works with nature to more closely mimic pre-development hydrologic functions. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements.

"MS4" is an acronym for "municipal separate storm sewer system".

"Maximum Extent Practicable" (MEP) is the technology-based discharge standard for Municipal Separate Storm Sewer Systems established by paragraph 402(p)(3)(B)(iii) of the *Federal Clean Water Act (CWA),* which reads as follows: "Permits for discharges from municipal storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system, design, and engineering methods, and other such provisions as the Administrator or the State determines appropriate for the control of such pollutants."

"Medium MS4" *Medium municipal separate storm sewer system* means all municipal separate storm sewers that are located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the1990 Decennial Census by the Bureau of the Census

"Monitoring" refers to tracking or measuring activities, progress, results, etc.;

"Municipal separate storm sewer system" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) pursuant to paragraphs R317-8-1.6(4), (7), & (14), or designated under UAC R317-8-3.9(1)(a)5:

> that is owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of wastes, storm water, or other wastes, including special districts under State Law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the state;
>
> that is designed or used for collecting or conveying storm water;
>
> which is not a combined sewer; and
>
> which is not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR 122.2.

"NOI" is an acronym for "Notice of Intent" to be covered by this Permit and is the mechanism used to "register" for coverage under a general Permit.

"Non-analytical monitoring" refers to monitoring for pollutants by means other than UAC R317-2-10 and 40 CFR 136, such as visually or by qualitative tools that provide comparative or rough estimates.

"Operator" is the person or entity responsible for the operation and maintenance of the MS4.

"Outfall" means a point source as defined by UAC R317-8-1.5(34) at the point where a municipal separate storm sewer discharges to waters of the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the state and are used to convey waters of the state.

"Phase II areas" means areas regulated under UPDES storm water regulations encompassed by Small MS4's (see definition 7.39.).

"Priority construction site" means a construction site that has potential to threaten water quality when considering the following factors: soil erosion potential; site slope; project size and type; sensitivity of receiving water bodies; proximity to receiving water bodies; non-storm water discharges and past record of non-compliance by the operators of the construction site.

"Redevelopment" is the replacement or improvement of impervious surfaces on a developed site.

"Runoff" is water that travels across the land surface, or laterally through the ground near the land surface, and discharges to waters of the state either directly or through a collection and conveyance system. Runoff includes storm water and water from other sources that travels across the land surface.

"SWMP" is an acronym for storm water management program. The SWMP document is the written plan that is used to describe the various control measures and activities the Permittee will undertake to implement the storm water management plan.

"SWPPP" is an acronym for storm water pollution prevention plan.

"Small municipal separate storm sewer system" is any MS4 not already covered by the Phase I program as a medium or large MS4. The Phase II Rule automatically covers on a nationwide basis all Small MS4s located in "urbanized areas" (UAs) as defined by the Bureau of the Census (unless waived by the UPDES Permitting authority), and on a case-by-case basis those Small MS4s located outside of UAs that the UPDES Permitting authority designates.

> This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

"SOP" is an acronym for standard operating procedure which is a set of written instructions that document a routine or repetitive activity. For the purpose of this Permit, SOPs should emphasize pollution control measures to protect water quality with details specific to the location.

"Storm water" means storm water runoff, snowmelt runoff, and surface runoff and drainage.

"Storm water management program" means a set of measurable goals, actions, and activities designed to reduce the discharge of pollutants from the Small MS4 to the maximum extent practicable and to protect water quality.

"TMDL" is an acronym for "Total Maximum Daily Load" and in this Permit refers to a study that: 1) quantifies the amount of a pollutant in a stream; 2) identifies the sources of the pollutant; and 3) recommends regulatory or other actions that may need to be taken in order for the impaired waterbody to meet water quality standards.

"Urbanized area" is a land area comprising one or more places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

"waters of the state" means all streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water,

surface and underground, natural or artificial, public or private which are contained within, flow through, or border upon this state or any portion thereof, except bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife which shall not be considered to be "waters of the state" under this definition ("UAC" R317-1-1).

WEST VALLEY CITY, UTAH

RESOLUTION NO. 20-137

A RESOLUTION APPROVING AN INTERLOCAL AGREEMENT WITH SALT LAKE COUNTY TO PARTICIPATE AS CO-PERMITTEES UNDER THE JORDAN VALLEY MUNICIPALITIES MS4 PERMIT.

WHEREAS, the City is required to obtain a permit in order to discharge storm water into waters of the state; and

WHEREAS, the City, Salt Lake County, and other municipalities in the area are co-permittees under an MS4 permit issued by the Utah Department of Environmental Quality; and

WHEREAS, as a condition of being a permit holder, each co-permittee is required to enforce the terms of the permit within its jurisdiction; and

WHEREAS, an interlocal agreement (the "Agreement") has been prepared by and between Salt Lake County and the City that set forth the rights, duties, and obligations of each of the parties with respect to said permit; and

WHEREAS, the City Council of West Valley City, Utah, does hereby determine that it is in the best interests of the health, safety, and welfare of the citizens of West Valley City to approve the Agreement;

NOW, THEREFORE, BE IT RESOLVED, by the City Council of West Valley City, Utah, that the Agreement is hereby approved in substantially the form attached, and that the Mayor is hereby authorized to execute said Agreement for and in behalf of West Valley City, subject to approval of the final form of the Agreement by the City Manager and the City Attorney's Office.

PASSED, APPROVED and MADE EFFECTIVE this 25th day of August, 2020.

WEST VALLEY CITY

MAYOR

ATTEST:

CITY RECORDER

County Contract No. _____

D.A. No. _____

INTERLOCAL COOPERATION AGREEMENT
between
SALT LAKE COUNTY
and
WEST VALLEY CITY
for
Participation as Co-Permittees under UPDES Permit No. UTS000001
(Jordan Valley Municipalities)
***

THIS AGREEMENT is entered into this ___ day of _____ 20___, by and between SALT LAKE COUNTY (the "COUNTY"), a body corporate and politic of the State of Utah; and WEST VALLEY CITY (the "CITY"), a municipal corporation of the State of Utah;

WITNESSETH:

WHEREAS, the parties are public agencies and are therefore authorized by the Utah Interlocal Cooperation Act, Section 11-13-1, et seq., UTAH CODE ANN., to enter into agreements with each other for joint or cooperative action; and

WHEREAS, the Environmental Protection Agency has published its " Final Rule" setting for the National Pollutant Discharge Elimination Systems permit application rules and regulations for stormwater discharges to municipal separate storm sewer systems; and

WHEREAS, the State of Utah, through its Department of Environmental Quality, Division of Water Quality, has statutory rule making authority and authority to issue pollutant discharge elimination system permits within the State of Utah pursuant to the rules and regulations of the Utah Pollutant Discharge Elimination System (" UPDES");

and

WHEREAS, the rules and regulations provide that where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such entities may be co-applicants to the same application and permit renewal; and

WHEREAS, the State of Utah has issued a UPDES permit (Permit No. UTS000001, the "Permit") to the Jordan Valley Municipalities, including the COUNTY and the CITY. A copy of the Permit is attached hereto as “Exhibit A" and incorporated herein; and

WHEREAS, Section 1.5.1.2 of the Permit provides, in addition to the Jordan Valley Municipalities including the COUNTY and the CITY, additional operators of small municipal separate storm sewers within the boundaries of Salt Lake County which sign on during the course of the permit cycle may also be co-permittees under the Permit; and

WHEREAS, the COUNTY and the CITY desire to sign on as co-permittees under the Permit and participate in the Jordan Valley Municipalities UPDES municipal storm water permit program under the terms and conditions set forth in the Permit and in this Agreement; and

WHEREAS, the parties now desire to enter into this Agreement setting forth their present understanding as to their respective responsibilities regarding their participation as co- permittees under the Permit;

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the parties agree as follows:

///

AGREEMENT

1. The COUNTY and the CITY agree to be co-permittees under the existing Permit for the geographic area, which includes all of the municipal separate storm water systems belonging to and operated by the parties to this Agreement as described in Section 1.2.1.2.2 of the Permit in "Exhibit A."

2. As co-permittees, each party agrees to implement and enforce within its own jurisdiction its own responsibilities for complying with the Permit requirements including, but not limited to, those responsibilities and requirements listed in the Co-Permittee Accountability statement. The Co-Permittee Accountability statement is attached hereto as “Exhibit B" and incorporated herein.

3. Each party shall be responsible to pay the costs relating to its own stormwater systems. The parties shall reimburse each other for expenses incurred in providing services for each other as may be agreed by the parties concerning the various tasks and responsibilities required under the Permit. Detailed services to be provided and reimbursement thereof is set forth in the interlocal media agreement, already in place, which is attached hereto as “Exhibit C" and incorporated herein.

4. To the maximum extent possible, the parties agree to assist each other in providing and sharing information, maps, data, drawings, plans and other resources necessary to comply with the Permit requirements. Co-permittees may also collaborate on projects, programs and control measures as may be required in Sections 1.6.1.2, 1.6.1.3 and 4.4 of the Permit.

5. The parties agree the duration of this Agreement shall commence upon entry and shall run concurrent with the duration of the Permit, which expires at midnight

on February 25, 2025. The parties agree that this Agreement shall not apply to any subsequent permits or co- permittees unless the parties agree in writing to extend this Agreement.

6. No separate entity is created by this Agreement; however, to the extent that any administration of this Agreement becomes necessary, the n the Public Works Director or City Engineer of each party, or their designees, shall constitute a joint board for such purpose.

7. In the event any property is jointly acquired and paid for by the municipalities for this undertaking, then it shall be divided as the parties representatives shall agree; or, if no agreement is reached, then it shall be divided according to their respective payments for property; or, if it cannot be practically divided, then the property shall be sold and the proceeds divided according to the parties proportionate share of the purchase of the item of property. If property is purchased at one party s sole expense in connection with this agreement, then the property so purchased shall be and remain the property of the party which purchased it.

8. This Agreement embodies the entire agreement between the parties hereto and cannot be altered except in a written amendment signed by the parties.

[Signatures on Following Page]

IN WITNESS THERE OF, the parties here to execute this Agreement effective as of the day and year first written above.

SALT LAKE COUNTY

By: _____
Mayor or Designee

Departmental Approval:

By: _____
Scott Baird, Public Works Director

Date: _____

Division Approval:

By: _____
Kade Moncur, Division Director

Date: _____

Approved as to Form:

By: Ryan W. Lambert
Deputy District Attorney

Date: 4/16/2020

WEST VALLEY CITY

By: Ron Bigelow
Mayor or Designee

ATTEST:

By: Michele Conrad
West Valley City Recorder

Date: 08/25/2020

Approved as to Form:

By: Brandon Hill
West Valley City Attorney

Date: 8/12/2020

Exhibit A

UPDES Permit No. UTS000001

Exhibit B

Co-Permittee Accountability Statement

Exhibit C

Interlocal Media Agreement

SALT LAKE COUNTY
CONTRACTS & PROCUREMENT

CONTRACT COVER PAGE

Contract Number: PT17126R
Sold To: West Valley City
Description: PWE-Interlocal- 207-2022 UPDES Media Campaign. County to administer the campaign and consultant's contract. City to pay County $12,000 for 1st year then $19,985.06 for subsequent years (amount may be increased by County). Term for 5 years to 06/30/2022
Revenue Amount: **$0.00**
Agency Name: Engineering
Start Date: 2017-07-01 **End Date:** 2022-06-30

County Contract No. PT17126R
D.A. No. 17-08823

INTERLOCAL COOPERATION AGREEMENT BETWEEN WEST VALLEY CITY AND SALT LAKE COUNTY FOR COST SHARING 2017 -2022 UPDES MEDIA CAMPAIGN

THIS AGREEMENT is made this 1 day of July, 2017, by and between WEST VALLEY CITY, a municipal corporation of the State of Utah, hereinafter "City," and SALT LAKE COUNTY, a body corporate and politic of the State of Utah, hereinafter "County." City and County may be referred to jointly as the "parties."

WITNESSETH:

WHEREAS, the parties are public agencies and are therefore authorized by the Utah Interlocal Cooperation Act, section 11-13-101, et seq., U.C.A., to enter into agreements with each other which will enable them to make the most efficient use of their powers; and,

WHEREAS, in connection with the Utah Pollutant Discharge Elimination System, hereinafter "UPDES", permitting process, the parties desire to cooperate with each other in funding a 2017 through 2022 multi-media public information and education campaign (hereinafter "Campaign") for the purpose of increasing public awareness about storm water pollution and educating the public about the prevention of storm water pollution in the City and the County; and,

WHEREAS, the parties desire to enter into an agreement whereby their respective responsibilities concerning the campaign are specifically set forth.

AGREEMENT:

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the parties agree as follows:

1. ***Media Campaign Services.*** The County will continue to retain the services of a consultant and has developed a plan for the public education and awareness campaign, which will consist of many phases of development for the benefit of all coalition participants.

2. ***Budget.*** The proposed budget for the campaign is One Hundred Ninety-Three Thousand Dollars ($193,000.00) per year, and includes the components and funding shown on *Appendix A* which is incorporated as part of this agreement.

3. ***County Responsibilities.*** The County shall be responsible for all matters pertaining to administering the campaign and the consultant's contract.

4. ***City Responsibilities.*** The City shall pay to the County the sum of Twelve Thousand Dollars ($12,000.00) for year 2017-2018. The first payment shall be made within thirty (30) days after execution of this agreement by the parties. For each subsequent year of the contract, City shall pay to the County the sum of Nineteen Thousand Nine Hundred Eighty-Five Dollars and Six Cents ($19, 985.06) per year as the City's share of the costs of funding of the Campaign. This amount may be increased by County each year by the lesser of three percent or the percentage increase, if any, in the latest published Consumer Price Index, All Urban Consumers. For subsequent annual payments, the County shall submit to City an invoice with the total cost of such services no later than August 15 of each year, which invoice the City shall pay within thirty days.

5. ***Interlocal Cooperation Act.*** In satisfaction of the requirements of the Interlocal Act, and in connection with this Agreement, the Parties agree as follows:

(a) This Agreement shall be approved by each Party pursuant to Section 11-13-202.5 of the Interlocal Act;

(b) This Agreement shall be reviewed as to proper form and compliance with applicable law by a duly authorized attorney on behalf of each Party, pursuant to

Section 11-13-202.5 of the Interlocal Act;

(c) A duly executed original counterpart of this Agreement shall be filed with keeper of records of each Party, pursuant to Section 11-13-209 of the Interlocal Act;

(d) Except as otherwise specifically provided herein, each Party shall be responsible for its own costs of any action taken pursuant to this Agreement, and for any financing of such costs; and

(e) No separate legal entity is created by the terms of this Agreement. To the extent that this Agreement requires administration other than as set forth herein, it shall be administered by a joint board of the public works directors of the City and the County, or their designees. No real or personal property shall be acquired jointly by the Parties as a result of this Agreement. To the extent that a Party acquires, holds or disposes of any real or personal property for use in the joint or cooperative undertaking contemplated by this Agreement, such Party shall do so in the same manner that it deals with other property of such Party.

6. ***Termination.*** Pursuant to Utah Code Ann. 11-13-206(a), the parties agree that this agreement may be terminated (with or without cause) by either party upon at least thirty (30) days prior written notice to the other party, in which event an accounting shall be made of all funds not spent or encumbered as of the date of termination.

7. ***Term.*** This agreement shall be effective on the date hereof and unless terminated as provided herein shall terminate 5 years from the date of execution.

8. ***Applicable Law.*** The provisions of this agreement shall be governed by and construed in accordance with the laws of the State of Utah.

9. ***Integration.*** This agreement constitutes the entire agreement between the parties pertaining to the subject matter hereof, and supersedes all prior agreements and understandings pertaining thereto.

10. ***Amendment.*** The parties may amend this agreement by a writing signed by the parties. The amendment shall not be effective if it is not in writing or if it is not signed by all the parties.

11. ***No Agency.*** Agents, employees or representatives of each party shall not be deemed to be agents, employees or representatives of the other.

[Signature Page to Follow]

IN WITNESS WHEREOF, the parties execute this agreement on the day and year first set forth above.

SALT LAKE COUNTY

By _____
Mayor or Designee

Recommended for Approval:

Kade Moncur Digitally signed by Kade Moncur
Date: 2017.12.13 13:22:34 -07'00'

Kade Moncur
Division Director

Date: 12/13/2017

Approved as to form and legality:

Angela Lane

Angela Lane
Deputy District Attorney

Date: 8/28/17

WEST VALLEY CITY

By _____
Mayor or Designee

ATTEST:

Deanna Varney

Deputy City Recorder

WEST VALLEY CITY, UTAH
CORPORATE SEAL

Approved as to form and legality

City Attorney

Date: 11.15.2017

APPENDIX A

Salt Lake County Stormwater Coalition Budget

Appendix A

Salt Lake County Stormwater Coalition Budget 2018

TV Media Partnership

Movie Theatre Advertising

Stormwater Quality Fair

Public Opinion Poll

Design/Print Education Material

Concept to Production of Leave Behinds

Website Hosting and Maintenance

Social Media Management

Public Relations Consultant

Total: $193,000.00

Note: Some of the budget items may vary from year to year depending on permit cycle requirements. For example, this year we are conducting a public opinion poll (required once per permit cycle) as part of the public involvement control measure. In other years, we may produce a new commercial and/or a social media outreach approach to public education.

Proposed 2018-2019 Salt Lake County Stormwater Coalition Funding

City	[1]Population	weighted factor			[2]$5000 offset	Cost per population
Cottonwood Heights	**34,285.00**	3.07	$5,130.83		$5,130.83	$0.15
Draper City	**47,328.00**	4.24	$7,082.74		$6,629.19	$0.14
Holladay City	**30,831.00**	2.76	$4,613.93	$386.07	$5,000.00	$0.16
Murray City	**49,230.00**	4.41	$7,367.38		$6,913.83	$0.14
Riverton City	**42,838.00**	3.84	$6,410.81		$5,957.25	$0.14
Sandy City	**95,836.00**	8.59	$14,342.08		$13,888.52	$0.14
West Jordan	**113,699.00**	10.19	$17,015.32		$16,561.76	$0.15
West Valley	**136,574.00**	12.24	$20,438.61		$19,985.06	$0.15
South Jordan	**69,034.00**	6.19	$10,331.10		$9,877.54	$0.14
SLCPU	**193,744.00**	17.36	$28,994.24		$28,540.68	$0.15
Bluffdale City	**11,809.00**	1.06	$1,767.24	$3,232.76	$5,000.00	$0.42
Herriman City	**35,385.00**	3.17	$5,295.45		$5,295.45	$0.15
Midvale City	**33,035.00**	2.96	$4,943.76	$56.24	$5,000.00	$0.15
South Salt Lake	**24,630.00**	2.21	$3,685.94	$1,314.06	$5,000.00	$0.20
Taylorsville City	**60,436.00**	5.42	$9,044.39		$8,590.83	$0.14
MSD	**79,463.00**	7.12	$11,891.82		$11,438.26	$0.14
Millcreek	**57,763.00**	5.18	$8,644.37		$8,190.81	$0.14
Totals	**1,115,920.00**	**100**	**$ 167,000.00**	**$ 4,989.13**	**$ 167,000.00**	

1) Per 2016 population and housing unit estimates by the United States Census Bureau

2) Divided equally among 11 entities
$4,989.13/11 Cities over 5K except CH & Herriman is $ 453.56

Other sources of funding include Davis County Coalition, UDOT, and Salt Lake County Health Department **$ 26,000.00**

Total Coalition Budget **$ 193,000.00**

[3]Proposed 2017/2018 Budget

TV Media Partnership	$ 100,000.00
Other Media outlets	$ 8,000.00
Stormwater Quality Fair	$ 10,000.00
Website design/Maintenance	$ 3,000.00
Leave Behinds	$ 5,000.00
Public Information Poll	$ 22,000.00
Total	$ 148,000.00
2018/2019 to include Annual PR Consultant Costs	$ 45,000.00

Total	**$ 193,000.00**

3) May vary from year to year based on permit requirements (i.e. public opinion poll conducted once per permit cycle). Other items that may be included in the budget:
Design and printing of education material
Concept to production of commercials
Social Media Management

Training Records

Training Logs available in the City's sharepoint Storm Water Management Plan Development Site

PLEASE SAVE ROSTER WITHIN THIS FOLDER IN ADDITION TO LOGGING TRAINING DATE/MATERIAL

	CHOOSE ONE					
DATE	**NEW HIRE TRAINING**	**ANNUAL TRAINING**	**ADDITIONAL TRAINING**	**SUBJECTS COVERED**	**TRAINING FACILITATOR(s)**	**TRAINING ROSTER ATTACHED Y/N**