

Appendix F-1

Project Specific Water Quality Management Plan

KHR Associates

December 6, 2024

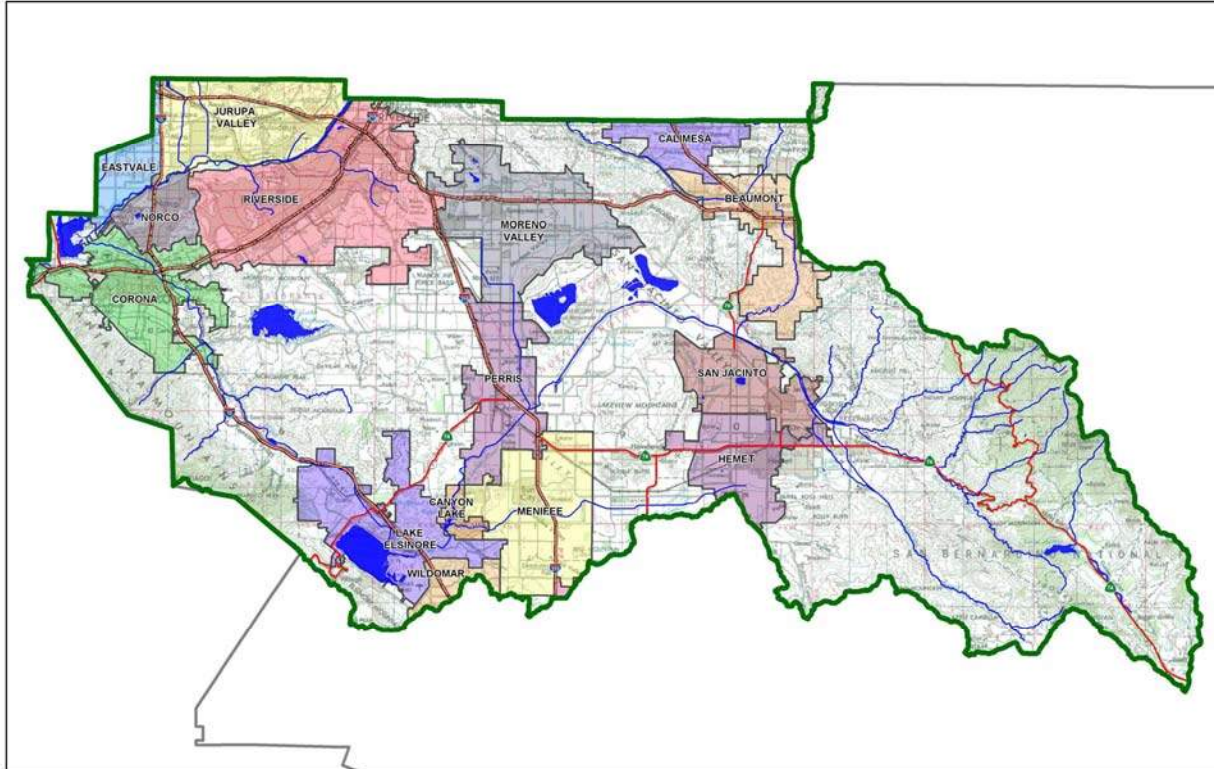
Project Specific Water Quality Management Plan

A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County

Project Title: Iron Lofts – 3093 MISSION INN AVENUE

Public Works No: GP-2023-00581

Design Review/Case No: PR-2023-001469



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- Preliminary
- Final

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Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**

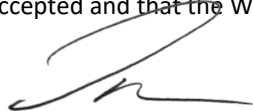
OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Iron Lofts, LLC by KHR Associates for the Iron Lofts - South project.

This WQMP is intended to comply with the requirements of the City of Riverside for A 300 unit mixed-use development, Planning Case No. PR-2023-001469 which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under the City of Riverside Water Quality Ordinance (Municipal Code Section 14.12.315).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."



Owner's Signature

Darrin Olson / Iron Lofts, LLC
Owner's Printed Name

December 6, 2024
Date

President
Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."



Preparer's Signature

James H. Kawamura
Preparer's Printed Name

December 6, 2024
Date

President
Preparer's Title/Position

Preparer's Licensure: Registered Civil Engineer No. C30560
Exp. 3/31/26



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Section A: Project and Site Information

The proposed development involves the construction of approximately 6.94 acres (302,137 sf.) for 300 residential dwelling units within a 4-story, 295 unit apartment building (72,883 square feet) and a 2-story, 5 unit townhome building (5,525 square feet) with attached 2 car garages (totaling 10 parking spots) with a parking lot that contains 294 carport parking stalls and 84 open parking stalls, along with repurposing a 4,912 square foot historic building for amenity purposes. There will be approximately 83,320 square feet of building area, 45,289 square feet of landscaping, 89,339 square feet of surface parking area, 48,781 square feet of carports, 156 square feet of trash enclosure, 2,073 square feet for a dog park, 2,283 square feet of decomposed granite, 29,586 square feet of hardscape, and 1,310 square feet of pool/spa area. The DCV drains to an Aqua-Swirl for pre-treatment prior to detention by a solid walled CMP and infiltration by a means of drywells.

PROJECT INFORMATION	
Type of Project:	Mixed-Use Residential
Planning Area:	Ward 2
Community Name:	Eastside
Development Name:	Iron Lofts - South
PROJECT LOCATION	
Latitude & Longitude (DMS): 33D 58M 50S N, 117D 21M 53S W	
Project Watershed and Sub-Watershed: Santa Ana; Santa Ana River, Reach 3	
APN(s): 211-071-001, 002, 004, 005, 023, 024; 211-072-001, 002, 004, 020, 021, 022	
Map Book and Page No.: Book 6, Page 48	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Mixed-Use Residential
Proposed or Potential SIC Code(s)	6513, 5399
Area of Impervious Project Footprint (SF)	256,848 sf.
Total Area of <u>proposed</u> Impervious Surfaces within the Project Limits (SF)/or Replacement	251,936 sf.
Does the project consist of offsite road improvements?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Does the project propose to construct unpaved roads?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Is the project part of a larger common plan of development (phased project)?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
EXISTING SITE CHARACTERISTICS	
Total area of <u>existing</u> Impervious Surfaces within the project limits (SF)	223,088 sf.
Is the project located within any MSHCP Criteria Cell?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Is a Geotechnical Report attached?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If no Geotech Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	N/A
What is the Water Quality Design Storm Depth for the project?	0.60

A.1 Maps and Site Plans

Appendix 1 includes a map of the local vicinity and existing site. In addition, WQMP Site Plan, located in Appendix 1, includes the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Downspouts
- Impervious Surfaces
- Standard Labeling

A.2 Receiving Waters

In order of upstream to downstream, the receiving waters that the project site is tributary to are as follows. A map of the receiving waters is included in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	Hydrologic Unit	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Santa Ana River, Reach 3	801.21	Copper, Lead, Indicator Bacteria	AGR, GWR, REC1, REC2, WARM, WILD, RARE	Approximately 15 miles

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
US Army Corps of Engineers, CWA Section 404 Permit	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Statewide Construction General Permit Coverage	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Statewide Industrial General Permit Coverage	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<i>Other (please list in the space below as required)</i>		
City of Riverside Conditional Use Permit	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
City of Riverside Design Review	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
City of Riverside Building Permit	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
City of Riverside Grading Permit	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
City of Riverside Construction Permit	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

Section B: Optimize Site Utilization (LID Principles)

Site Optimization

Does the project identify and preserve existing drainage patterns? If so, how? If not, why?

The proposed development will match as close to possible existing drainage paths and minimize usage of inlets. For the most part, drainage will occur over impervious surfaces.

Does the project identify and protect existing vegetation? If so, how? If not, why?

Although vacant, the site does not have any existing vegetation or sensitive areas to protect.

Does the project identify and preserve natural infiltration capacity? If so, how? If not, why?

The geotechnical report has shown that the underlying soils are good for infiltration and therefore, impervious surfaces will be collected by the onsite drainage system that directs the stormwater to an underground detention tank for infiltration by drywells.

Does the project identify and minimize impervious area? If so, how? If not, why?

The nature of the developments limits the potential to minimize impervious areas. Landscaping will be utilized around the buildings and parking lots as well as used within the parking lots to the maximum extent practical. Drive aisles, parking stalls and sidewalks will be designed to the minimum widths allowed.

Does the project identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

Walkways within portions of the site will drain to adjacent landscaping. Due to anticipated soil conditions, including collapsible soils, runoff will not be dispersed to adjacent pervious areas. The geotechnical evaluation recommends landscaping not be planned within 10 feet of the buildings unless impermeable liners underlie the landscaping, and that roof drainage be collected and conducted away from the buildings. The project will be using drywells to infiltrate the stormwater design volume.

Section C: Delineate Drainage Management Areas (DMAs)

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)	Area (Sq. Ft.)	DMA Type
1A	Landscape	24,357	D
1B	Roof (Building, Carport, Trash Enclosure)	61,934	D
1C	Walk/Turf	21,520	D
1D	Asphalt	44,125	D
2A	Landscape	20,932	D
2B	Roof (Building, Carport)	70,323	D
2C	Walk/Water Features	13,732	D
2D	Asphalt	45,214	D

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)
N/A			

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				Type 'C' DMAs that are draining to the Self-Retaining Area		
DMA Name/ ID	Post-project surface type	Area (square feet)	Storm Depth (inches)	DMA Name / ID	[C] from Table C.4 =	Required Retention Depth (inches)
		[A]	[B]		[C]	[D]
N/A						

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet)	Post-project surface type	Runoff factor	Product	DMA name /ID	Area (square feet)	Ratio
	[A]		[B]	[C] = [A] x [B]		[D]	[C]/[D]
N/A							

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
1A	DW1A
1B	DW1B
1C	DW1C
1D	DW1D
2A	DW2A
2B	DW2B
2C	DW2C
2D	DW2D

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (ref: Chapter 2.4.4 of the WQMP Guidance Document)? Y N

Geotechnical Report

A Geotechnical Report is required by the City of Riverside to confirm present and past site characteristics that may affect the use of Infiltration BMPs, see Appendix 3.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? Y N

Infiltration Feasibility

Table D.1 Infiltration Feasibility

Does the project site...	YES	NO
...have any DMAs with a seasonal high groundwater mark shallower than 10 feet? If Yes, list affected DMAs:		X
...have any DMAs located within 100 feet of a water supply well? If Yes, list affected DMAs:		X
...have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact? If Yes, list affected DMAs:		X
...have measured in-situ infiltration rates of less than 1.6 inches / hour? If Yes, list affected DMAs: DMAs 1 & 2 have rates less and more than 1.6 inches/hour.	X	
...have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface? If Yes, list affected DMAs:		X
...geotechnical report identify other site-specific factors that would preclude effective and safe infiltration? Describe here: According to GPI's Geotechnical Feasibility Evaluation, soils are anticipated to be moderately collapsible. The evaluation states an infiltration setback beyond the typical distance of 10-feet from buildings should be anticipated. The report also states that the on-site soils are severely corrosive to metal. The detention tank is surrounded by washed stone and then wrapped by geotextile to prevent the soil from contacting the pipe.	X	

Infiltration rates at end of drywells will have infiltration rates that exceeds 1.6 inches per hour.

D.2 Harvest and Use Assessment

The following conditions apply:

- Reclaimed water will be used for the non-potable water demands for the project.
- Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verified with the City of Riverside).
- The Design Capture Volume will be addressed using Infiltration Only BMPs. (Harvest and Use BMPs are still encouraged, but are not required as the Design Capture Volume will be infiltrated or evapotranspired).
- None of the above.

Harvest and Use BMPs need not be assessed for the site.

Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: 1.04 AC

Type of Landscaping (Conservation Design or Active Turf): Conservation Design

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 5.90 AC

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

The project EIATIA factor: 0.79 (Conservation); 0.47 (Active Turf)

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: 4.66 AC (conservation); 2.77 AC (Active Turf)

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
2.77 AC	1.04 AC

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

For the project, the following applies:

- LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4
- A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5.
- None of the above.

D.4 Feasibility Assessment Summaries

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
1A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

LID BMPs are feasible for all project DMAs.

D.5 LID BMP Sizing

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Enter BMP Name / Identifier Here DW 1A, DW 1B, DW 1C, DW 1D		
	[A]				[B]			
1A	24,357	Landscaping	0.1	0.11	2,690.4	Design Storm Depth (in) [E]	Design Capture Volume, V_{BMP} (cubic feet) [F]	Proposed Volume on Plans (cubic feet) [G]
1B	61,934	Roof	1	0.89	55,245.1			
1C	21,520	Walk	1	0.89	19,195.8			
1D	44,125	Asphalt	1	0.89	39,359.5			
	151,936				116,490.8	0.6	5,824.5	5,875

[B], [C] are obtained from Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A of the WQMP Guidance Document

[G] is obtained from LID BMP design procedure sheet, placed in Appendix 6

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Enter BMP Name / Identifier Here DW 2A, DW 2B, DW 2C, DW 2D		
	[A]				[B]			
2A	20,932	Landscaping	0.1	0.11	2,312.1	Design Storm Depth (in) [E]	Design Capture Volume, V_{BMP} (cubic feet) [F]	Proposed Volume on Plans (cubic feet) [G]
2B	70,323	Roof	1	0.89	62,728.1			
2C	13,732	Walk	1	0.89	12,248.9			
2D	45,214	Asphalt	1	0.89	40,330.9			
	150,201				117,620	0.6	5,881	5,909

[B], [C] are obtained from Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A of the WQMP Guidance Document

[G] is obtained from LID BMP design procedure sheet, placed in Appendix 6

Solid walled corrugated metal pipe will be used to detain the DCV (Design Capture Volume) and drywells will infiltrate the DCV within the required drawdown time of 48 hours. See Appendix 6 for the calculations.

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to confirmation of LID waiver approval by the Regional Board). For the project, the following applies:

LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- Or -

The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Regional Board and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

The project does not create a Hydrologic Condition of Concern, meeting the criteria for HCOC Exemption as shown below:

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermitttee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? Y N

HCOC EXEMPTION 2: The volume and time of concentration¹ of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? Y N

Results included in Table F.1 below and hydrologic analysis included in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	Post-condition	% Difference
Time of Concentration			
Flow (CFS)			
Volume (Cubic Feet)			
Volume Infiltrated			

¹ Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (Prado Dam, Santa Ana River) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

Does the project qualify for this HCOC Exemption? Y N

F.2 HCOC Mitigation

As an alternative to the HCOC Exemption Criteria above, HCOC criteria is considered mitigated if the project meets one of the following conditions, as indicated:

- a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.
- b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.
- c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.
- d. None of the above.

Section G: Source Control BMPs

The following table identifies the potential sources of runoff pollutants for this project and specifies how they are addressed through permanent controls and operational BMPs:

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
On-site storm drain inlets	<p>Location of inlets shown on WQMP Exhibit.</p> <p>Mark all inlets with the words “Only Rain Down the Storm Drain” or similar.</p>	<p>Maintain and periodically repaint or replace inlet markings.</p> <p>Provide stormwater pollution prevention information to new site owners, lessees, or operators.</p> <p>See applicable operational BMPs in Fact Sheet SC-44, “Drainage Systems Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.</p> <p>Include the following in lease agreements: “Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.”</p>
Interior floor drains and elevator shaft sump pumps	Interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	Inspect and maintain drains to prevent blockages and overflow.
Need for future indoor & structural pest control	Pests will be kept out of buildings using barriers, screens and caulking.	Provide Integrated Pest Management information to owners, lessees, and operators.
Landscape/Outdoor Pesticide Use	<p>Location of native trees shown on WQMP Exhibit.</p> <p>Stormwater treatment facility shown on WQMP Exhibit.</p> <p>Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p>Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides</p>	<p>Maintain landscaping using minimum or no pesticides.</p> <p>Provide IPM information to new owners, lessees and operators.</p> <p>See applicable operational BMPs in “What you should know for.....Landscape and Gardening” at http://rcflood.org/stormwater/.</p>

	<p>that can contribute to stormwater pollution.</p> <p>Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p>Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p>To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p>	
Pools, spas, ponds, decorative fountains, and other water features	Plumb to sewer in accordance with local requirements. If draining to landscaped area, remove any chemicals and debris before slowly discharging to landscaping.	See applicable operational BMPs in "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/ .
Refuse areas	<p>Location of refuse areas shown on WQMP Exhibit.</p> <p>Signs will be posted on or near dumpster stating "Do not dump hazardous materials here" or similar.</p> <p>Any doors to trash area and bin lids will be kept closed.</p> <p>Bins will be emptied weekly.</p>	<p>Receptacles will be inspected weekly and repaired/replaced when leaking.</p> <p>Bin lids are to remain closed and refuse area will be maintained daily.</p> <p>See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.</p>
Vehicle and Equipment Cleaning	Vehicle and equipment cleaning will not be allowed on-site.	<p>Lease agreement shall state that vehicle and equipment cleaning is prohibited on-site.</p> <p>See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.</p>
Vehicle / Equipment Repair and Maintenance	Vehicle and equipment repair and maintenance will not be allowed on-site.	No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids,

		<p>hazardous materials, or rinse water from parts cleaning into stormwater.</p> <p>No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building. Leaking vehicle fluids shall be contained or drained from vehicle immediately.</p> <p>No person shall leave unattended drip parts or other open containers containing vehicle fluids, unless such containers are in use or in an area of secondary containment.</p>
<p>Miscellaneous Drain or Wash Water or Other Sources:</p> <ul style="list-style-type: none"> Boiler drain lines; Condensate drain lines; Rooftop equipment; Drainage sumps; Roofing, gutters, and trim; Other sources 	<p>Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.</p> <p>Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.</p> <p>Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment.</p> <p>Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.</p> <p>Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.</p>	
<p>Plazas, sidewalks, and parking lots</p>		<p>Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into</p>

		the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.
--	--	--

Section H: Construction Plan Checklist

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	Latitude / Longitude
DW 1A – DW 1D	Drywell, Aqua-Swirl, CMP	Preliminary Storm Drain Plan	33.979589,-117.364986
DW 2A – DW 2D	Drywell, Aqua-Swirl, CMP	Preliminary Storm Drain Plan	33.980343, -117.364394

Section I: Operation, Maintenance and Funding

As required by the City of Riverside, the following Operation, Maintenance and Funding details are provided as summarized:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred.
3. An outline of general maintenance requirements for the Stormwater BMPs selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance.

See Appendix 9 for a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on site, and an agreement assigning responsibility for maintenance and providing for inspections and certification.

Maintenance Mechanism: Covenant & Agreement, Funding for the on-going operation and maintenance of post-construction BMPs is the responsibility of Iron Lofts, LLC (the property owner).

Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

Y N

Operation and Maintenance Plan and Maintenance Mechanism is included in Appendix 9. Educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP are included in Appendix 10.

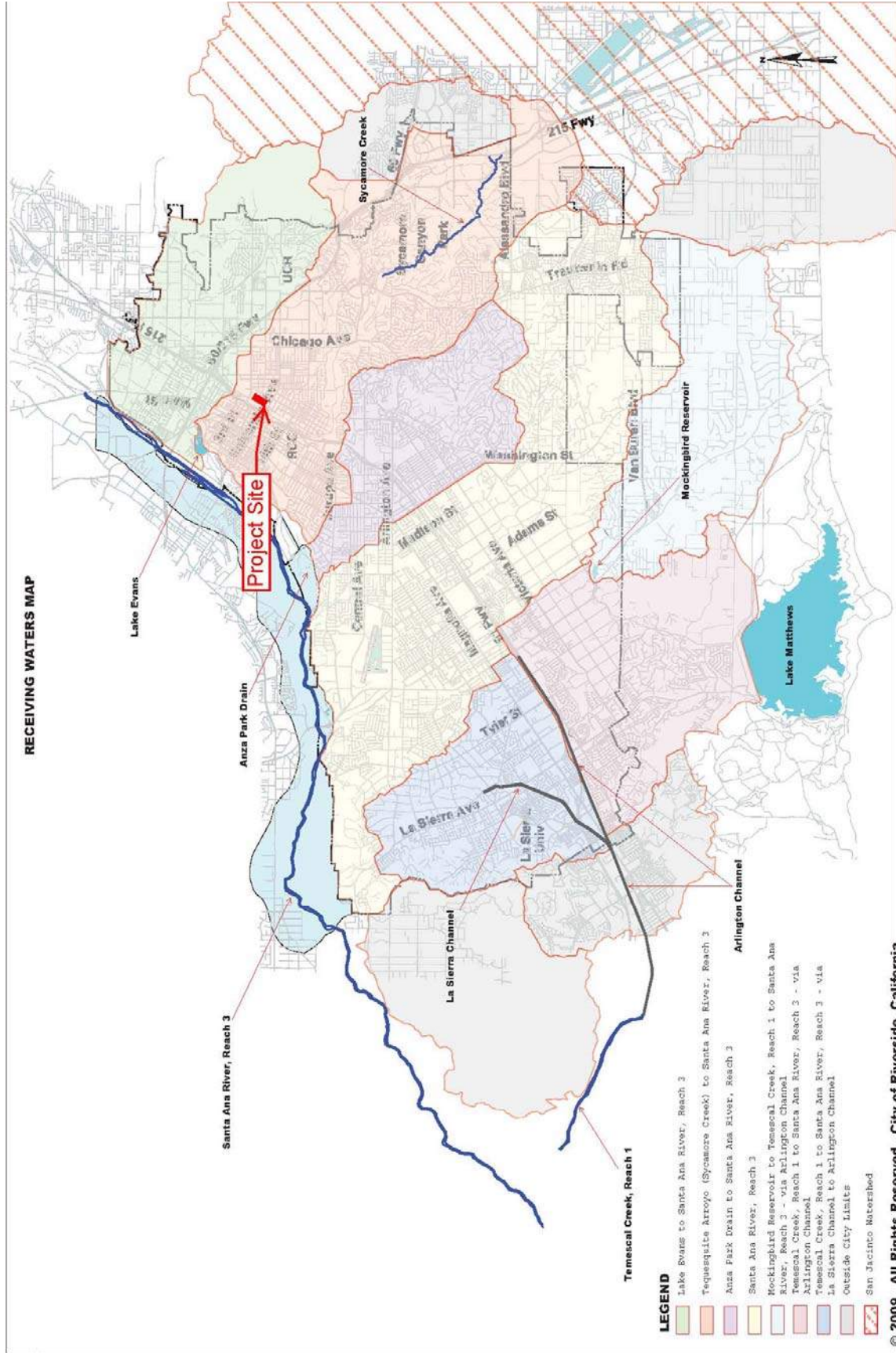
Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map

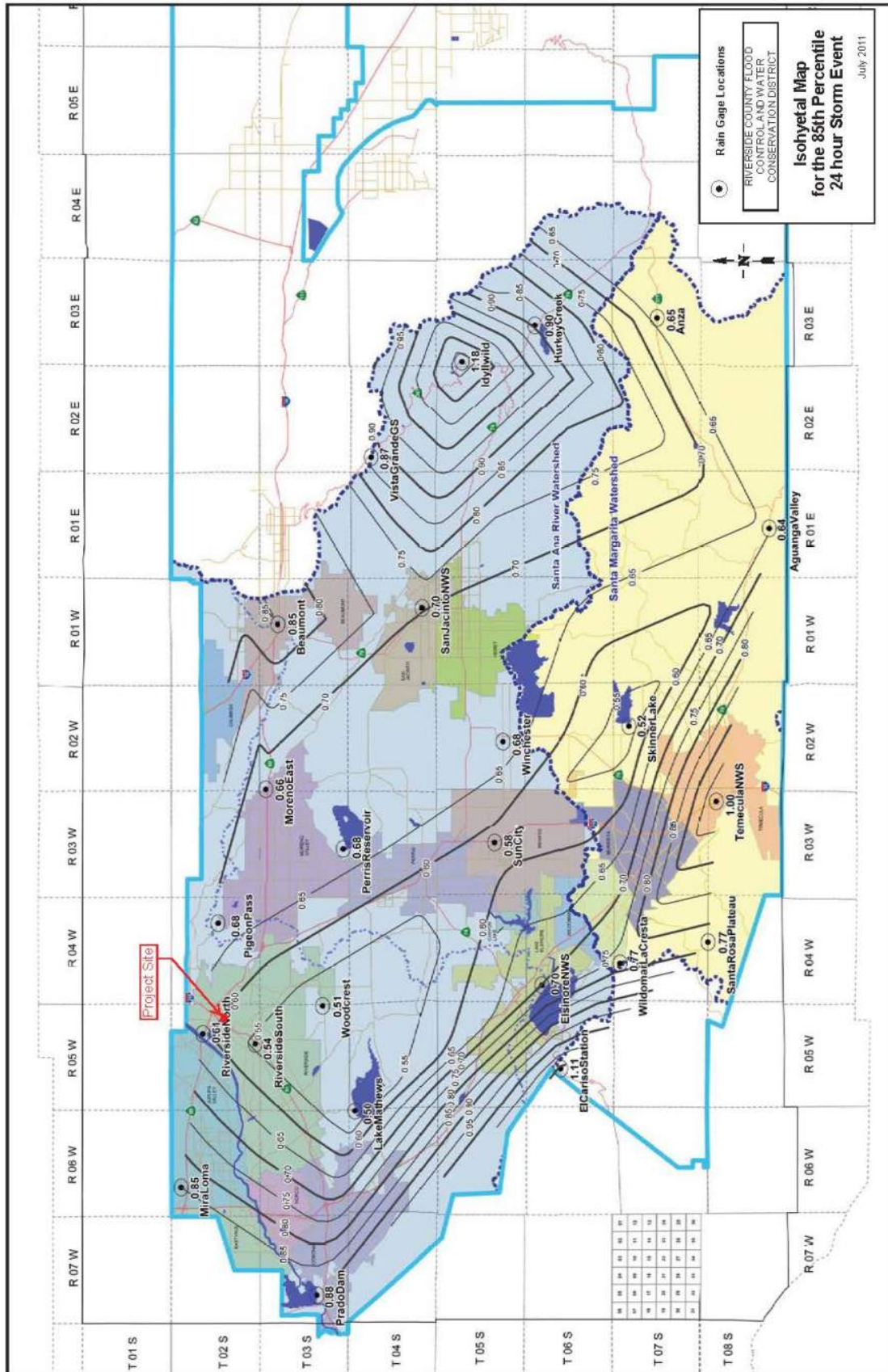
Location Map



Receiving Waters Map



85th Percentile Isohyetal Map





DMA SUMMARY

DMA DESIGNATION	SURFACE TYPE	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	TOTAL AREA (SF)	DESIGN VBMP (CF)	DESIGN FLOW RATE (CFS)	TREATMENT BMP TYPE	BMP VOLUME (CF)	PRETREATMENT TYPE/MODEL/FLOW RATE	DRAWDOWN TIME (HRS)
1	LANDSCAPING	-	24,357	24,357	5,825	0.50	DETENTION (8'X90' CMP) INFILTRATION (4 DRYWELLS)	5,875	AQUA-SWIRL #AS-2 1.1 CFS	44.98
	ROOF/CARPORT	61,934	-	61,934						
	WALK/TURF	21,520	-	21,520						
	ASPHALT	44,125	-	44,125						
TOTAL	A, B, C, D	127,579	24,357	151,936						
2	LANDSCAPING	-	20,932	20,932	5,881	0.50	DETENTION (6'X156' CMP) INFILTRATION (4 DRYWELLS)	5,909	AQUA-SWIRL #AS-2 1.1 CFS	43.51
	ROOF/CARPORT	70,323	-	70,323						
	WALK/TURF	13,732	-	13,732						
	ASPHALT	45,214	-	45,214						
TOTAL	A, B, C, D	129,269	20,894	150,201						

DRYWELL SUMMARY

DRYWELL DESIGNATION	DEPTH FROM RIM TO INVERT (FT)	SLURRY DEPTH (FT)	SETTLING CHAMBER DEPTH (FT)	TOTAL INFILTRATION DEPTH (FT)	TOTAL DRYWELL DEPTH (FT)
1A	15.83	15.83	23.28	57.45	73.28
1B	16.32	16.32	23.77	57.45	73.77
1C	17.22	17.22	24.7	57.45	74.67
1D	17.55	17.55	25	57.45	75
DESIGN #s	17.55	17.55	25	57.45	75
2A	14.89	14.89	24.67	59.78	74.67
2B	15.06	15.06	24.84	59.78	74.84
2C	15.22	15.22	25	59.78	75
2D	14.76	14.76	24.54	59.78	74.54
DESIGN #s	15.22	15.22	25	59.78	75

OWNER

IRON LOFTS, LLC
 1201 DOVE STREET-SUITE 520
 NEWPORT BEACH, CALIFORNIA 92660
 ATTN: DARRIN OLSON
 PHONE NO.: (949) 975-1122

APN

211-071-001, 002, 004, 005, 023, 024;
 211-072-001, 002, 004, 020, 021, 022;

LEGEND

DESCRIPTION	SYMBOL	DMA NAME
SD-12 & SC-41: PERMEABLE AREA (LANDSCAPE AREA)		#A
SC-41: IMPERMEABLE ROOF SURFACES		#B
SD-32 & SC-34: TRASH ENCLOSURE		#B
SC-41: IMPERMEABLE HARDSCAPE AREA		#C
POOL/WATER FEATURE		#C
SC-43: IMPERMEABLE VEHICULAR SURFACE		#D
SC-44: PROPOSED PRIVATE STORM DRAIN		
PROPOSED STORM DRAIN JUNCTION STRUCTURE		
PROPOSED MAXWELL IV DRYWELL		
PROPOSED AQUA-SWIRL		
SD-13 & SC-44: PROPOSED DROP INLET/CATCH BASIN WITH STENCILING		
LID BMP IDENTIFIER		
LID BMP DRAINAGE AREA BOUNDARY		
DMA #		
DMA AREA		

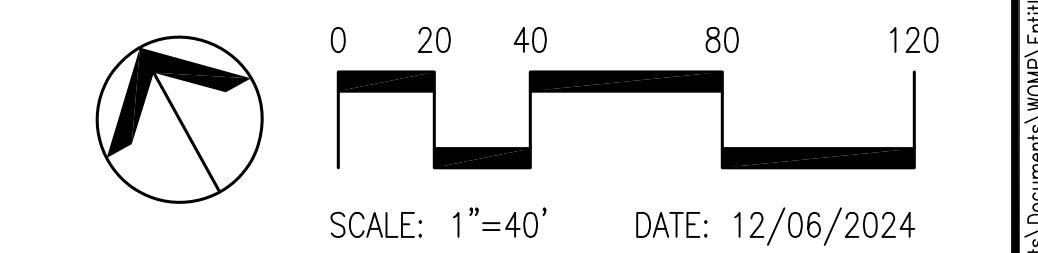
*DMA NAME USES LID BMP IDENTIFIER OF THE SPECIFIC BMP DRAINAGE AREA WITH THE LETTER CORRESPONDING TO THE SURFACE TYPE.

SITE INFORMATION

TOTAL PROPERTY AREA: 302,137 SF (6.94 AC)
 IMPERVIOUS AREA & %: 256,848 SF (5.90 AC) 85%
 PERVIOUS AREA & %: 45,289 SF (1.04 AC) 15%
 TOTAL DESIGN CAPTURE VOLUME (DCV): 11,706 CF
 TOTAL SWQDF: 1.0 CFS
 DISTURBED AREA: 297,225 SF (6.82 AC)
 UNDISTURBED AREA (HISTORIC BUILDINGS): 4,912 SF (0.11 AC)

IRON LOFTS
IRON LOFTS, LLC

PRELIMINARY WQMP SITE PLAN
RIVERSIDE, CALIFORNIA

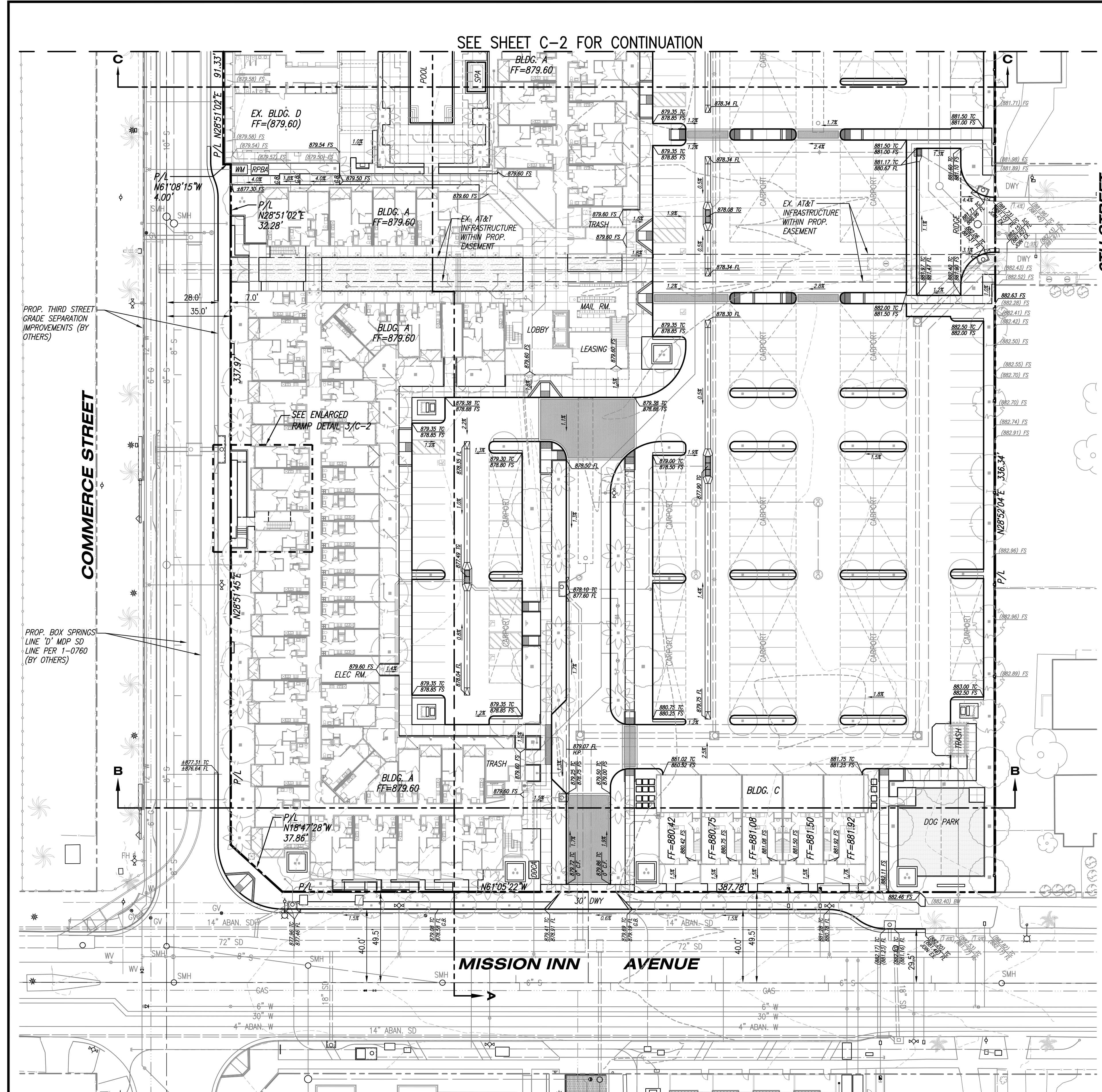


KHR ASSOCIATES
 CONSULTING ENGINEERS/SURVEYORS/PLANNERS
 17530 Von Karman Ave. - Suite 200
 Irvine, California 92614
 Tel (949) 756-6440

R:\Reim\Reim-Riverside-Iron Lofts\Documents\WQMP\Entitlement\APPENDIX 1 - WQMP-SITE-PLAN.dwg Dec 06, 2024 - 9:58am

Appendix 2: Construction Plans

Grading and Drainage Plans



EARTHWORK QUANTITY ESTIMATE

CUT/EXPORT (REMEDIATION)	20,000 CY
FILL/IMPORT	10,000 CY

LOT AREA

PROPOSED LOT 1: 302,137 S.F. (6.94 ACRES)

FORESTRY NOTES

- PROTECT IN PLACE EXISTING STREET TREES IN PUBLIC RIGHT-OF-WAY ALONG MISSION INN AVE. (WASHINGTONIA FILIFERA).
- IF EXISTING STREET TREES ARE FOUND BY TREE INSPECTOR AT TIME OF SCHEDULED SITE INSPECTION (AFTER FINE GRADING AND HARDSCAPE INSTALLATION IS COMPLETE) TO BE MISSING, DEAD, DAMAGED, OR IN POOR CONDITION, THEY WILL BE REQUIRED TO BE REMOVED AND REPLACED WITH 24" BOX SIZE TREES TO TREE INSPECTOR'S SPECIFICATIONS. PLANTING, STAKING, IRRIGATION, AND ROOT BARRIERS TO LANDSCAPE & FORESTRY SPECIFICATIONS.
- PLANT IN PUBLIC RIGHT-OF-WAY, 24" BOX SIZE CELTIS SINENSIS ALONG MISSION INN AVE., LOPHSTEMON CONFERTUS (BRISBANE BOX) ALONG COMMERCE ST., AND MAGNOLIA GRANDIFLORA (ST. MARY) ALONG 5TH ST. AT TYPICAL SPACING 25' O.C.
- PRIOR TO ANY PLANTING, TREE INSPECTOR TO DETERMINE PRECISE LOCATIONS AT TIME OF SCHEDULED SITE INSPECTION AFTER FINE GRADING AND HARDSCAPE INSTALLATION IS COMPLETE. PLANTING, STAKING, IRRIGATION, AND ROOT BARRIERS TO LANDSCAPE & FORESTRY SPECIFICATIONS.

LEGAL DESCRIPTION

LOTS 1, 2, 3, 4, 5, 6, 7, 22 THROUGH 37 IN BLOCK 6 OF WHITES ADDITION, IN THE CITY OF RIVERSIDE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 6, PAGE 48 OF MAPS, RECORDS OF SAN BERNARDINO COUNTY.

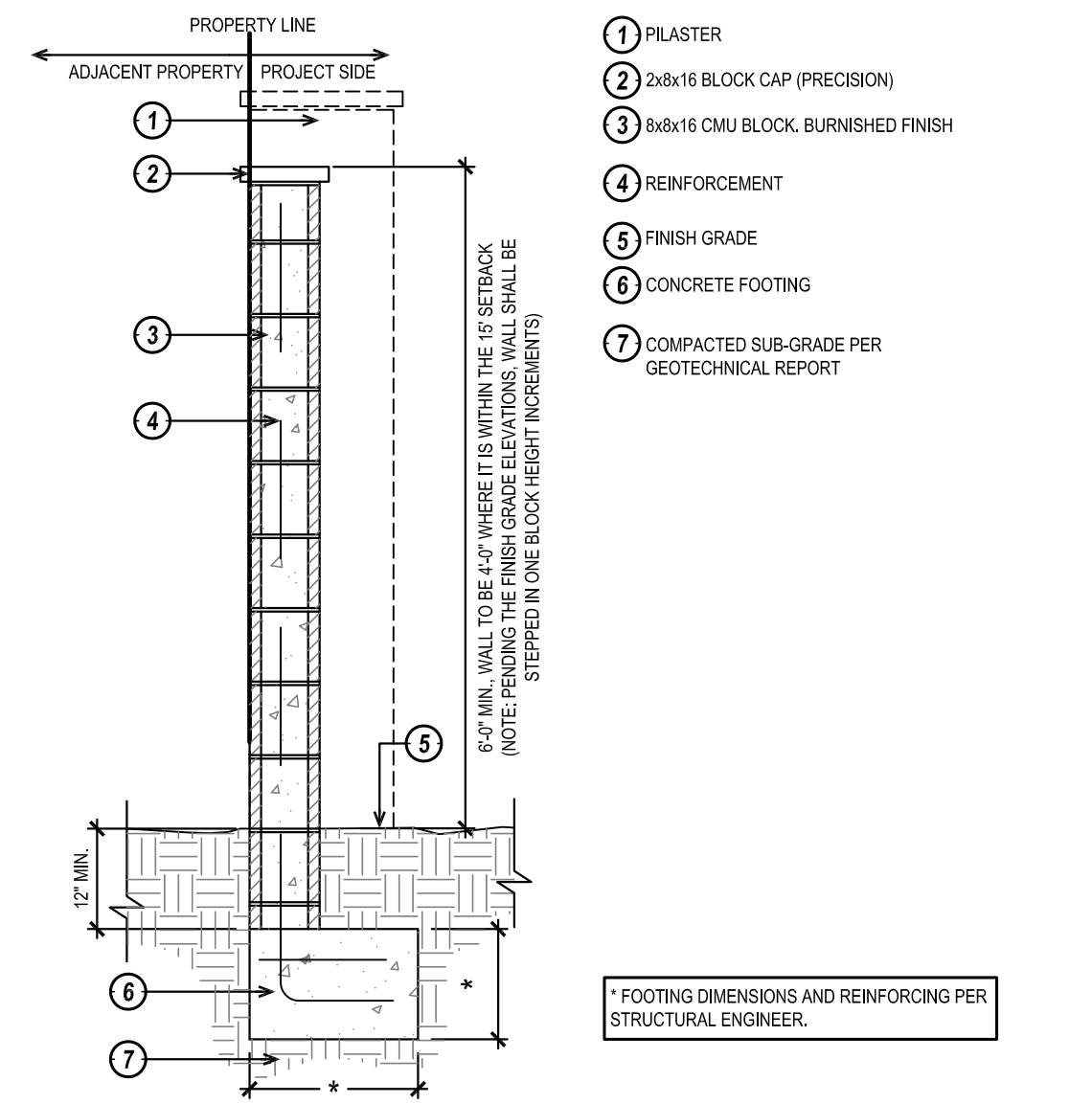
LOTS 1, 2, 3 THROUGH 7, INCLUSIVE, 22 THROUGH 37 INCLUSIVE, IN BLOCK 8 OF WHITES ADDITION, IN THE CITY OF RIVERSIDE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 6, PAGE 48 OF MAPS, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

EASEMENTS

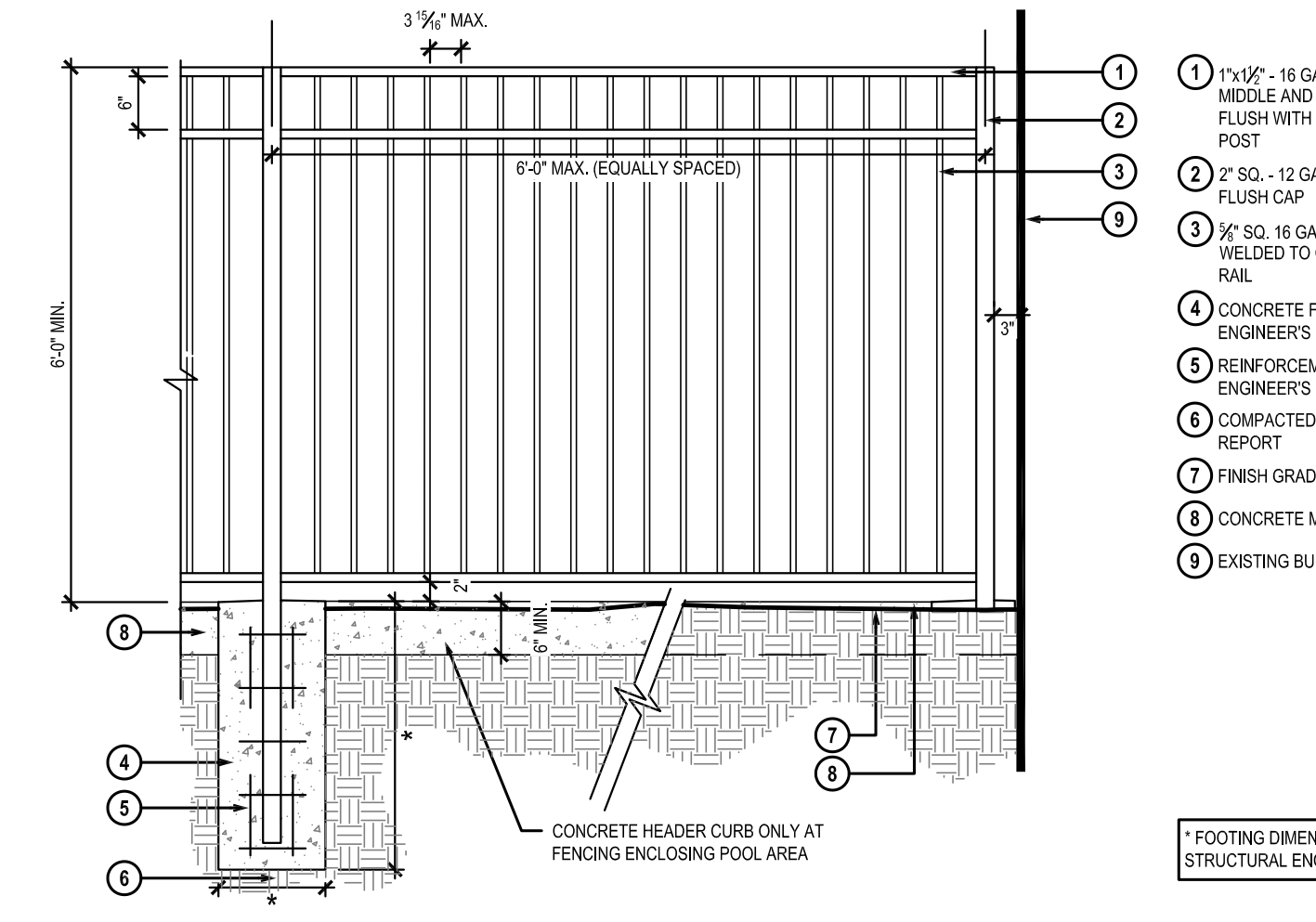
- EASEMENT(S) FOR INGRESS, EGRESS AND PARKING PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, GRANTED TO SOUTHERN PACIFIC COMPANY RECORDED MARCH 13, 1928 IN BOOK 755, PAGE 184 OF DEEDS.
THE EXACT LOCATION AND EXTENT OF SAID EASEMENT IS NOT DISCLOSED OF RECORD. NO MENTIONED EASEMENTS WITHIN SAID DOCUMENT, DOES NOT AFFECT.
- EASEMENT(S) FOR RIVERSIDE WATER COMPANY CONSTRUCTION AND MAINTENANCE OF ALL NECESSARY WATER DITCHES, PIPES, FLUMES AND APPARATUS FOR THE PURPOSES OF IRRIGATION AND DOMESTIC USE RECORDED IN BOOK 42, PAGES 294 AND 296, OF DEEDS, SAN BERNARDINO COUNTY RECORDS.
THE EXACT LOCATION IS UNDETERMINED FROM RECORD, DOCUMENT ILLEGIBLE.
- EASEMENT(S) GRANTED TO SOUTHERN PACIFIC TRANSPORTATION COMPANY, A DELAWARE CORPORATION FOR RAILROAD PURPOSES AS RESERVED IN A DOCUMENT RECORDED DECEMBER 17, 1985 AS INSTRUMENT NO. 283346, OF OFFICIAL RECORDS.
AFFECTS: OVER, ACROSS AND UPON THE NORTHWESTERLY 15.00 FEET OF SAID LOTS 4 AND 25. *AFFECTS TO BE QUITCLAIMED.*
- EASEMENT(S) GRANTED TO SOUTHERN PACIFIC TRANSPORTATION COMPANY, A DELAWARE CORPORATION FOR RAIL AND RAILROAD RELATED EQUIPMENT FACILITIES AND COMMUNICATIONS AND PIPELINES, LINES AND FACILITIES OF EVERY KIND AND NATURE INCLUDING BUT NOT LIMITED TO ALL EXISTING FACILITIES, TELEPHONE, TELEGRAPH, TELEVISION AND FIBER OPTIC LINES AND RELATED EQUIPMENT AND RIGHTS INCIDENTAL THERETO RECORDED AUGUST 31, 1990 AS INSTRUMENT NO. 326250, OF OFFICIAL RECORDS. *AFFECTS TO BE QUITCLAIMED.*
- EASEMENT(S) FOR TELECOMMUNICATIONS PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED TO QWEST COMMUNICATIONS COMPANY, LLC IN A DOCUMENT RECORDED DECEMBER 16, 2013 AS INSTRUMENT NO. 2013-0581753 OF OFFICIAL RECORDS. *AFFECTS PARCEL 2, NOT PLOTTABLE PER RECORD, TO BE QUITCLAIMED.*

BENCHMARK

INDEX 6647 PAGE 42 DATED JANUARY 20, 2005
 FOUND PK NAIL AND CITY SURVEYOR TAG IN WESTERLY END OF CATCH BASIN ON THE SOUTHERLY SIDE OF UNIVERSITY AVENUE, 95± EASTERLY OF CENTERLINE OF PARK AVENUE.
 ELEVATION: 891.353 FEET



1 - PERIMETER AND POOL CMU WALL
SCALE: NONE



2 - PERIMETER AND POOL FENCE
SCALE: NONE

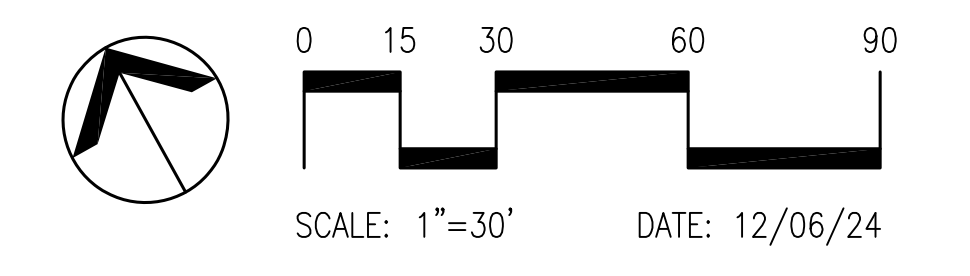
***NOTE**
SEE SHEETS C-12 THRU C-14 FOR SITE SECTIONS.

GENERAL NOTES

- THE STREET IMPROVEMENTS SHOWN HEREON ALONG COMMERCE ST. AND 5TH ST. ARE PER HDR'S PLANS, AS PART OF THE CITY'S THIRD STREET GRADE SEPARATION PROJECT. THE STREET IMPROVEMENT SCOPE OF WORK FOR THE IRON LOFTS DEVELOPMENT WILL INCLUDE TYING INTO HDR'S STREET IMPROVEMENTS AT KEY LOCATIONS AND CONTINUING ALONG THE IRON LOFTS' FRONTS ALONG THE NORTH SIDE OF MISSION INN AVE., THE EAST SIDE OF COMMERCE ST., AND THE SOUTH SIDE OF 5TH ST., AS SHOWN HEREON.
- THE ABANDONED RAIL LINE ALONG COMMERCE ST. SHALL ALSO BE REMOVED PER HDR'S PLANS.

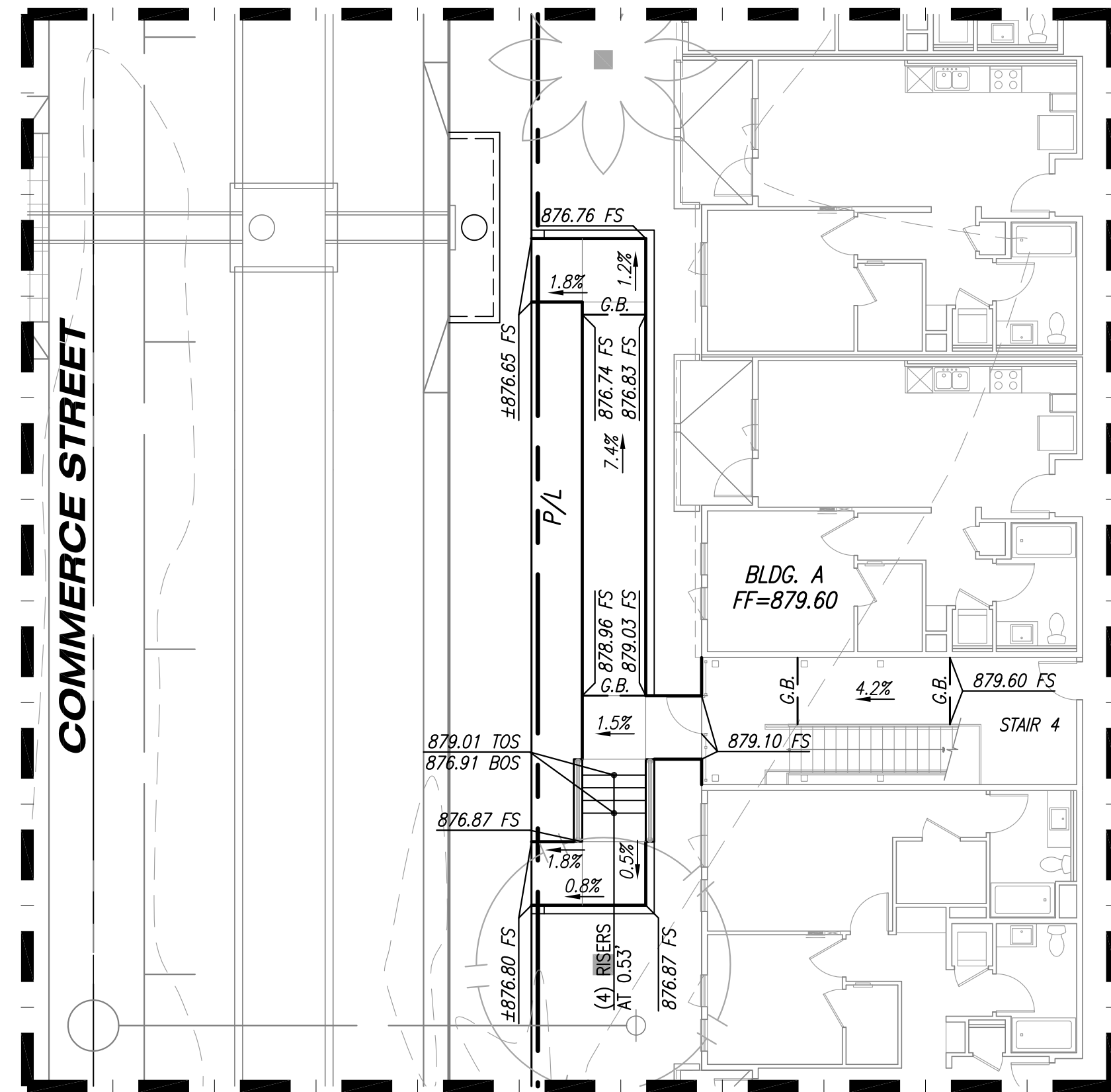
IRON LOFTS
IRON LOFTS, LLC

C-1: PRELIMINARY GRADING PLAN
RIVERSIDE, CALIFORNIA



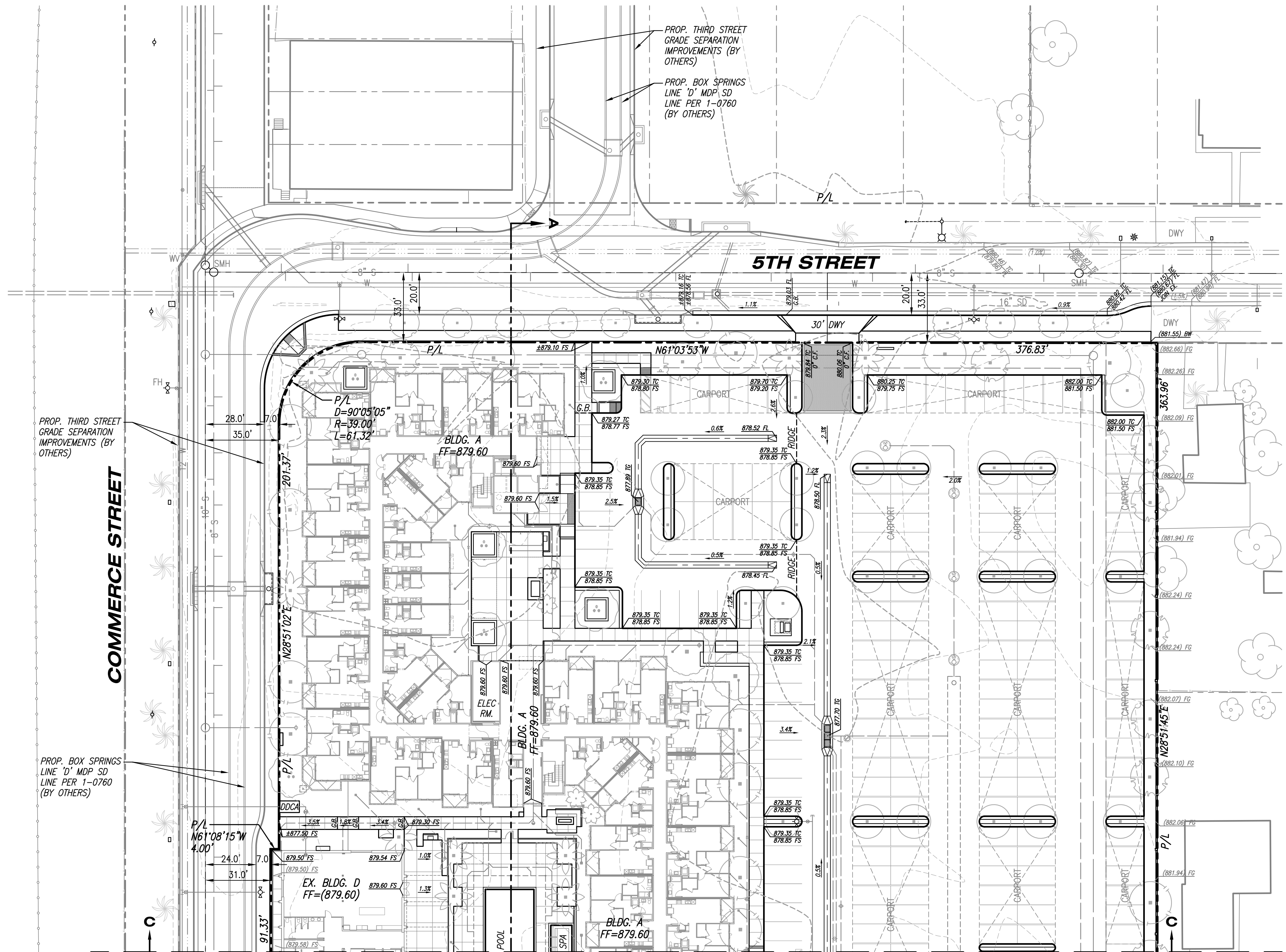
KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Ave. - Suite 200
Irvine, California 92614
Tel (949) 756-6440

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3 - ENLARGED RAMP DETAIL

SEE SHEET C-1
SCALE: 1"=10'

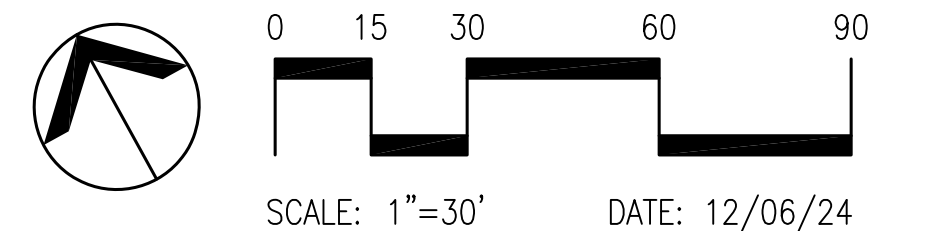


SEE SHEET C-1 FOR CONTINUATION

GENERAL NOTES

1. THE STREET IMPROVEMENTS SHOWN HEREON ALONG COMMERCE ST. AND 5TH ST. ARE PER HDR'S PLANS, AS PART OF THE CITY'S THIRD STREET GRADE SEPARATION PROJECT. THE STREET IMPROVEMENT SCOPE OF WORK FOR THE IRON LOFTS DEVELOPMENT WILL INCLUDE TYING INTO HDR'S STREET IMPROVEMENTS AT KEY LOCATIONS AND CONTINUING ALONG THE IRON LOFTS' FRONTAGES ALONG THE NORTH SIDE OF MISSION INN AVE., THE EAST SIDE OF COMMERCE ST., AND THE SOUTH SIDE OF 5TH ST., AS SHOWN HEREON.
2. THE ABANDONED RAIL LINE ALONG COMMERCE ST. SHALL ALSO BE REMOVED PER HDR'S PLANS.

**NOTE*
SEE SHEETS C-12 THRU C-14 FOR SITE SECTIONS.



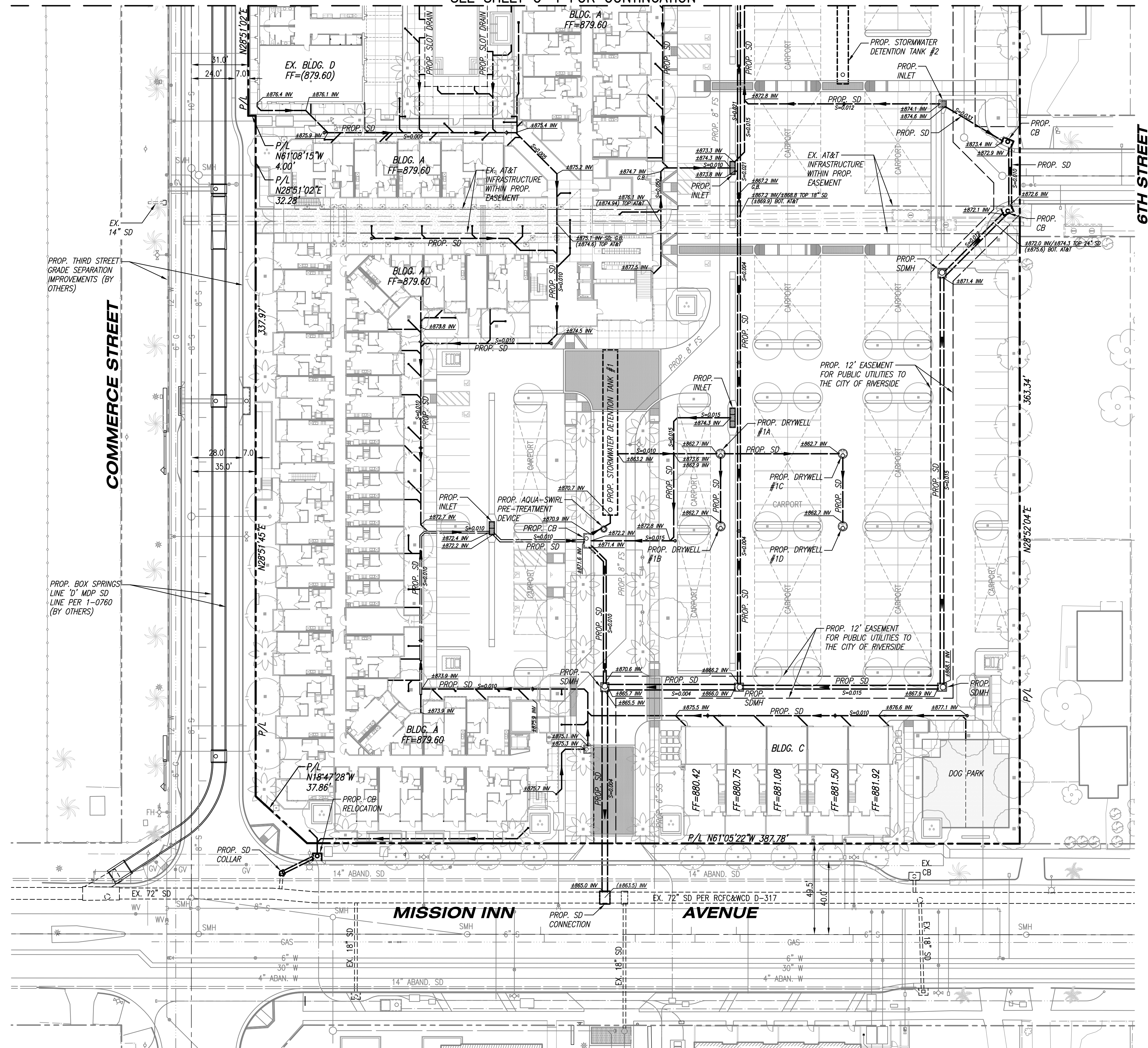
IRON LOFTS
IRON LOFTS, LLC

C-2: PRELIMINARY GRADING PLAN
RIVERSIDE, CALIFORNIA

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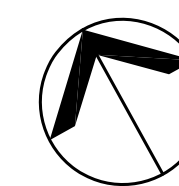
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SEE SHEET C-4 FOR CONTINUATION



NOTE

THE PROPOSED STORM DRAIN CONNECTION TO THE EXISTING 72" STORM DRAIN LINE IN MISSION INN AVE. REQUIRES AN ENCROACHMENT PERMIT AND IS CONTINGENT UPON RCFC AND WATER CONSERVATION DISTRICT APPROVAL.



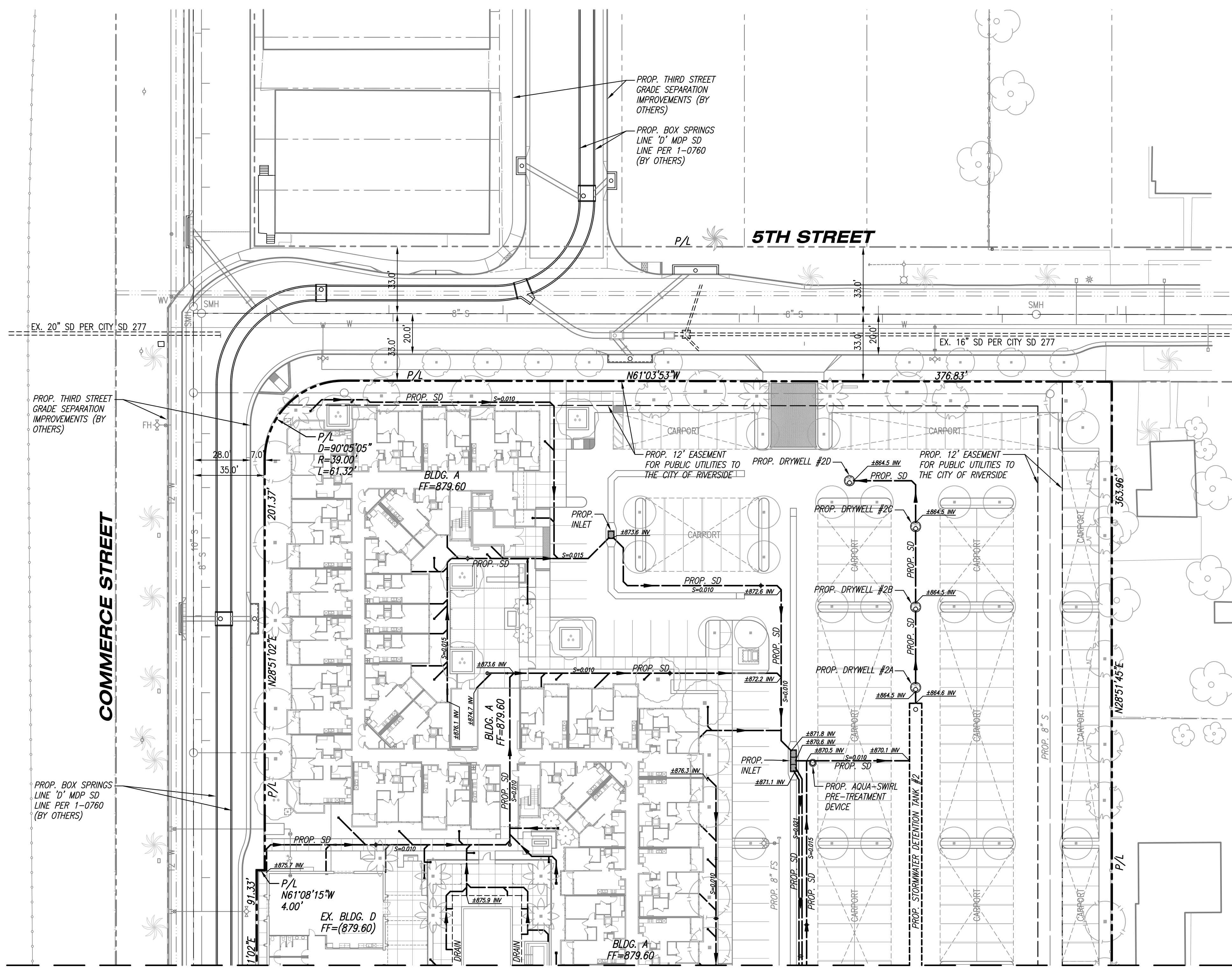
SCALE: 1"=30' DATE: 12/06/24

IRON LOFTS
IRON LOFTS, LLC

C-3: PRELIMINARY STORM DRAIN PLAN
RIVERSIDE, CALIFORNIA

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 Tel (949) 756-6440

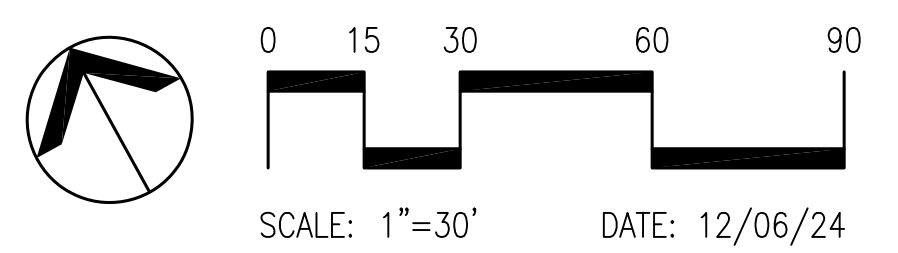
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SEE SHEET C-3 FOR CONTINUATION

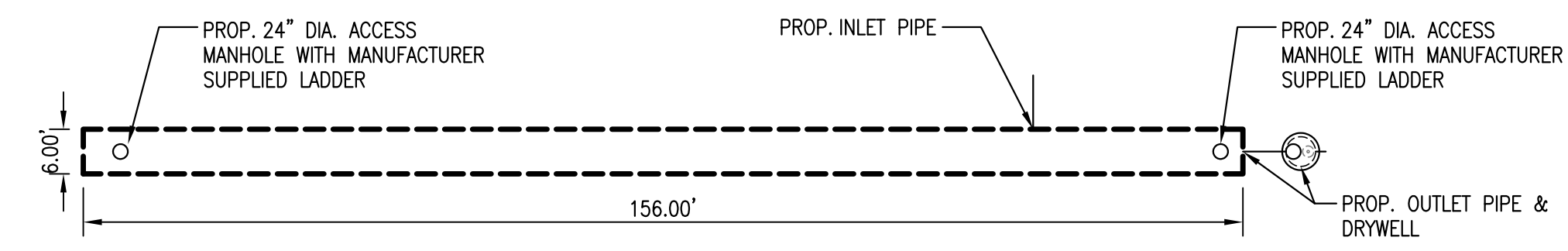
IRON LOFTS
IRON LOFTS, LLC

C-4: PRELIMINARY STORM DRAIN PLAN
RIVERSIDE, CALIFORNIA

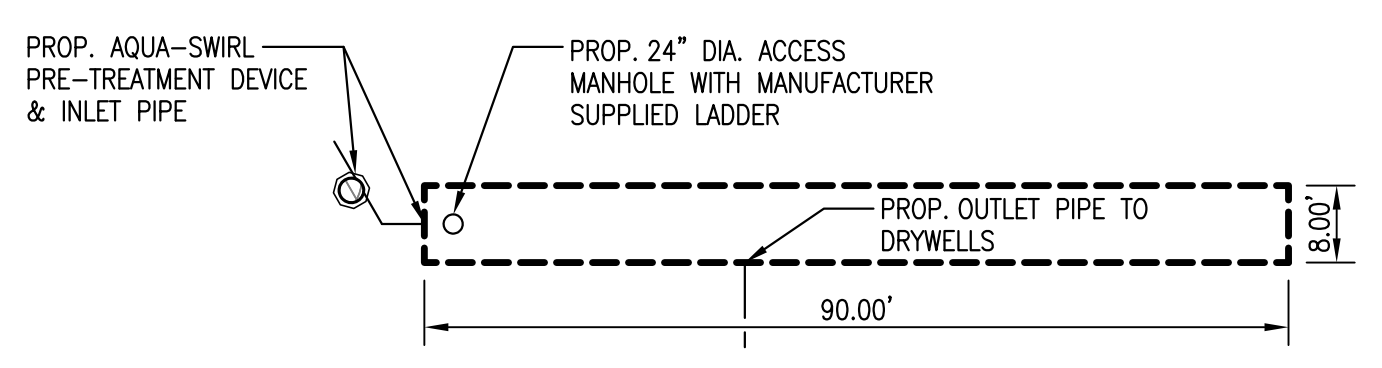


KHR ASSOCIATES
 CONSULTING ENGINEERS/SURVEYORS/PLANNERS
 17530 Von Karman Ave. - Suite 200
 Irvine, California 92614
 Tel (949) 756-6440

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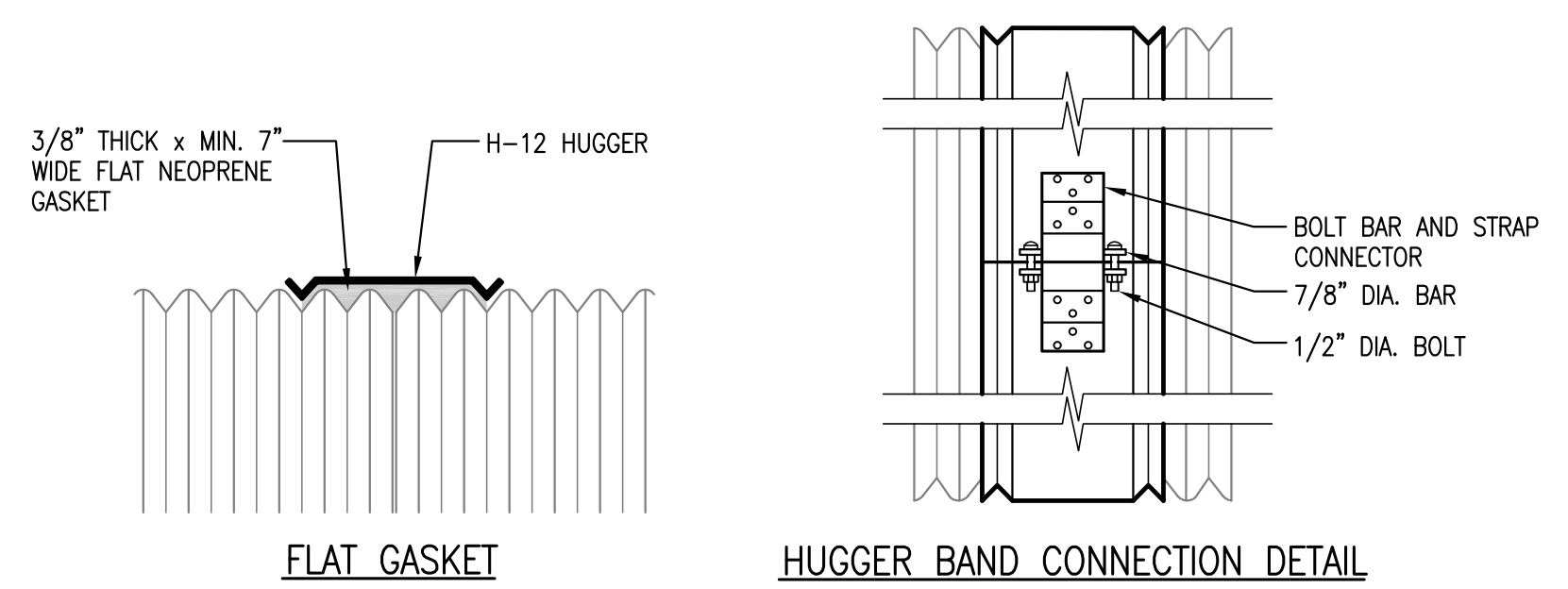
72" DIA. SOLID WALL CMP TANK (SYSTEM #2) TO HOLD A MINIMUM VOLUME OF 4,412 CF



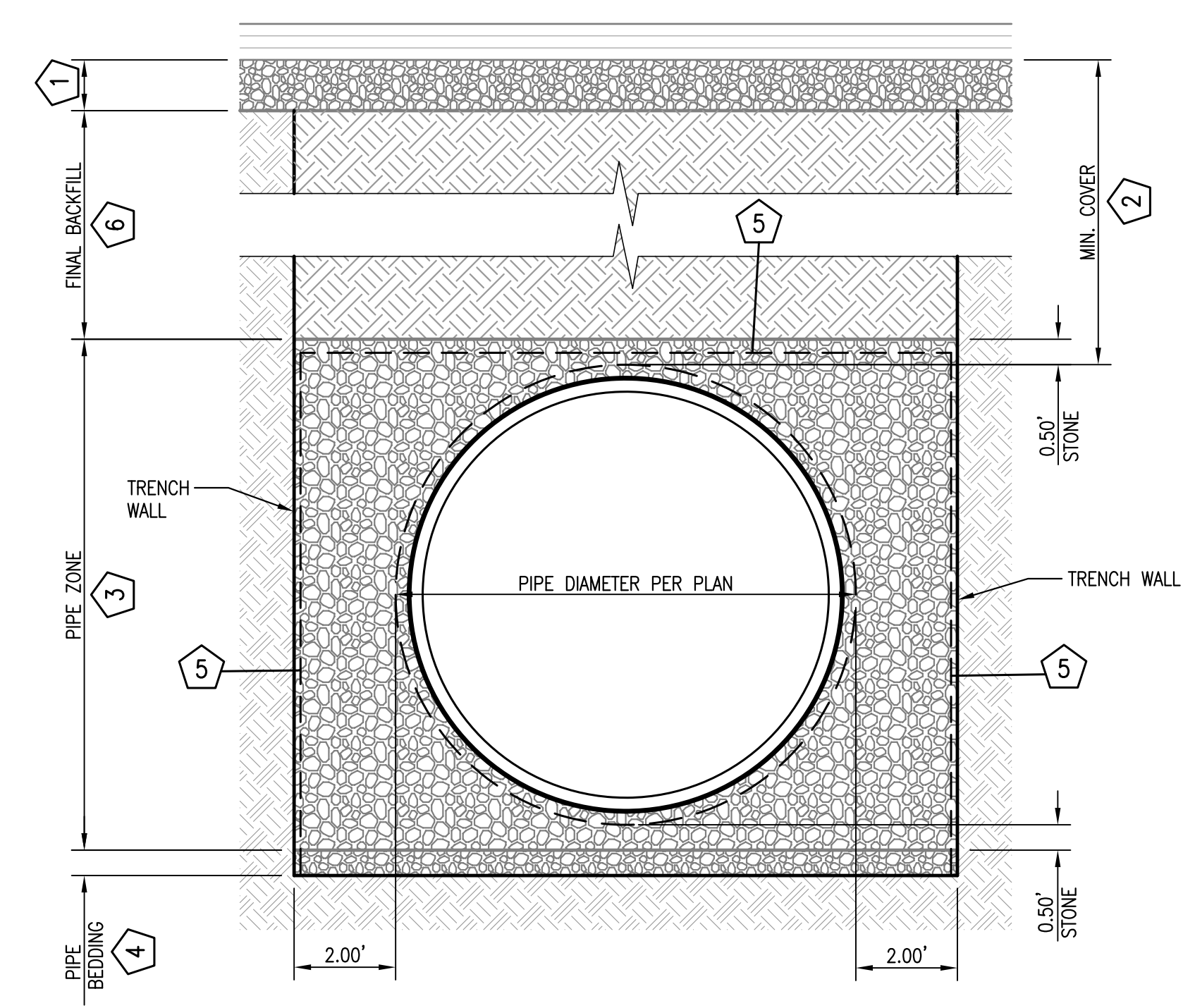
96" DIA. SOLID WALL CMP TANK (SYSTEM #1) TO HOLD A MINIMUM VOLUME OF 4,495 CF

HUGGER BAND GENERAL NOTES

- REFER TO CONTECH BAND SELECTION GUIDE FOR BAND WIDTH, GAGE, AND FASTENER TYPES.
- BANDS FOR PIPE-ARCH ARE THE SAME AS FOR EQUIVALENT DIAMETER ROUND PIPE.
- BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
12" THRU 48" 1-PIECE
54" THRU 96" 2-PIECE
102" THRU 144" 3-PIECES
- BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.



UNDERGROUND DETENTION PIPE DETAILS
SCALE: NONE



TANK BACKFILL SECTION A-A

SPECIFICATION FOR CORRUGATED STEEL PIPE-ALUMINIZED TYPE 2 STEEL

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE CORRUGATED STEEL PIPE (CSP) DETAILED IN THE PROJECT PLANS.

MATERIAL
THE ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M274 OR ASTM A929.

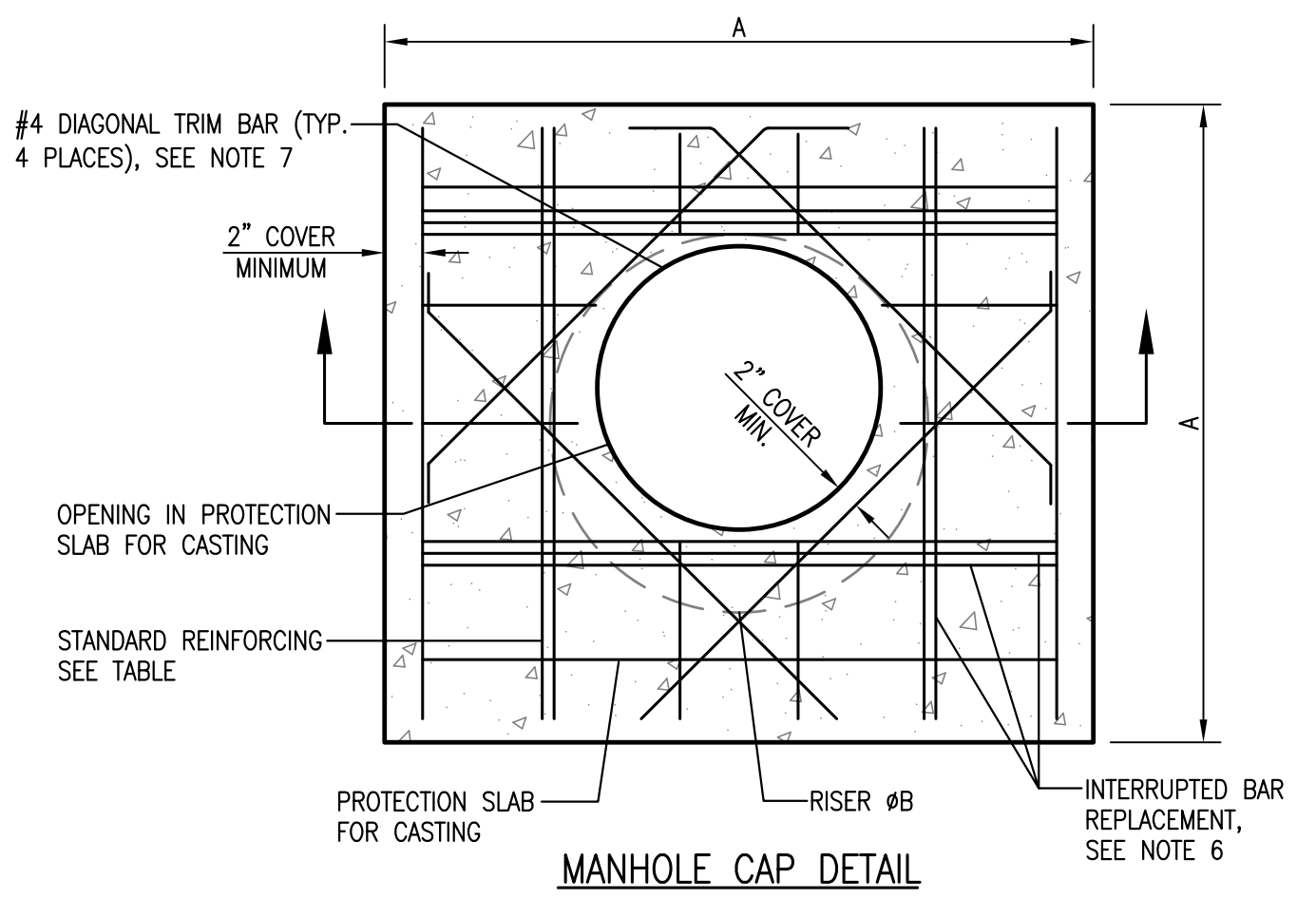
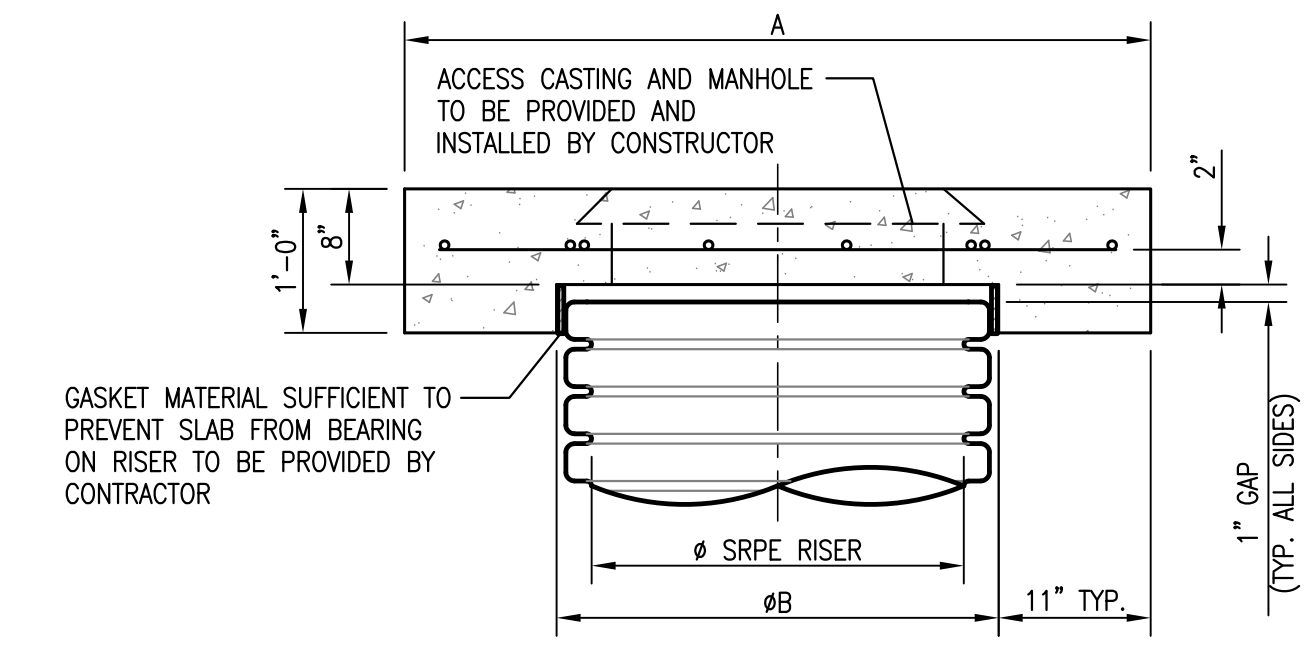
PIPE
THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A760. THE PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION (NCSIPA)

INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A798 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.



FOUNDATION/BEDDING PREPARATION

PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE SOILS ENGINEER. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE 4-6 INCHES OF A WELL-GRADED GRANULAR MATERIAL SHALL BE PLACED AS THE BEDDING.

BACKFILL

THE BACKFILL MATERIAL SHALL BE FREE-DRAINING ANGULAR WASHED STONE 3/4"-2" PARTICLE SIZE. MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL - SLICING, RODDING, AIR-TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS. COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE PROJECT ENGINEER OR HIS REPRESENTATIVE IS SATISFIED WITH THE LEVEL OF COMPACTION. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT, AND MAINTAINING BALANCED LOADING ON ALL PIPES IN THE SYSTEM, DURING ALL SUCH OPERATIONS.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

KEY

- AGGREGATE ROAD BASE PER GRADING PLANS.
- 12" MIN. FOR DIAMETERS THROUGH 96"; 18" MIN. FOR DIAMETERS FROM 102" TO 144"; 24" MIN. FROM 150" TO 192"; AND 30" MIN. FROM 198" TO 234", MEASURED TO TOP OF RIGID OR BOTTOM OF FLEXIBLE PAVEMENT.
- FREE DRAINING ANGULAR WASHED STONE 3/4" TO 2" PARTICLE SIZE. DENSIFIED PER GEOTECHNICAL REPORT.
- WELL GRADED GRANULAR BEDDING, ROUGHLY SHAPED TO FIT THE BOTTOM OF PIPE 4" TO 6" IN DEPTH.
- CONTECH C-40 NON-WOVEN GEOTEXTILE REQUIRED, WRAPPING AROUND TOP AND SIDES OF TRENCH.
- FINAL BACK FILL MATERIAL PLACED IN 8" LIFTS AND COMPACTED TO 90% PER PROJECT SOILS REPORT, GRADING PLANS AND SPECIFICATIONS.

GENERAL NOTES

- REFER TO CONTECH BAND SELECTION GUIDE FOR BAND WIDTH, GAGE, AND FASTENER TYPES.
- BANDS FOR PIPE-ARCH ARE THE SAME AS FOR EQUIVALENT DIAMETER ROUND PIPE.
- BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
12" THRU 48" 1-PIECE
54" THRU 96" 2-PIECES
102" THRU 144" 3-PIECES
- BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
- REROLLED ANNUAL END CORRUGATIONS ARE NORMALLY 2-2/3" X 1/2".
- DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.

MANHOLE CAP NOTES

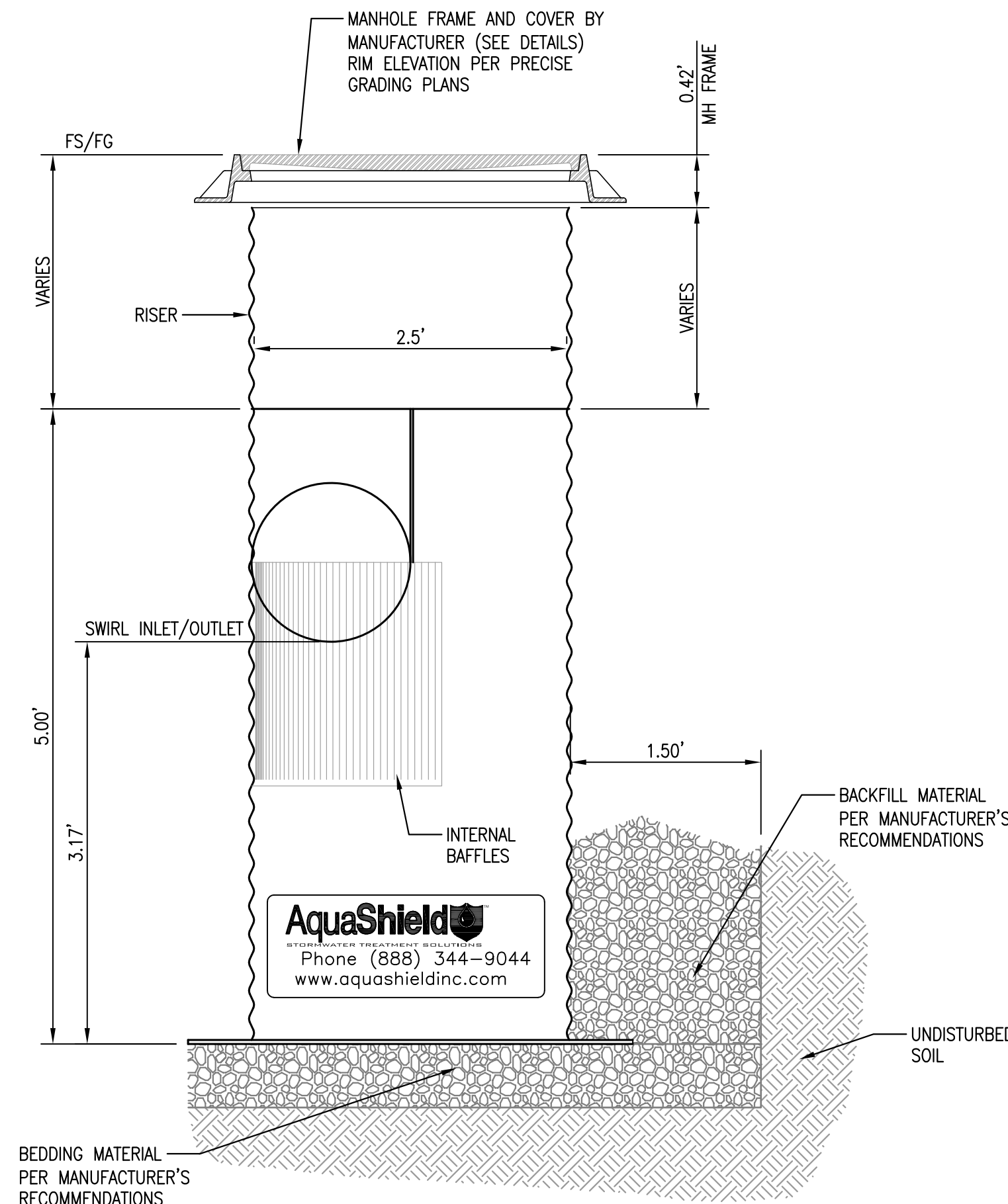
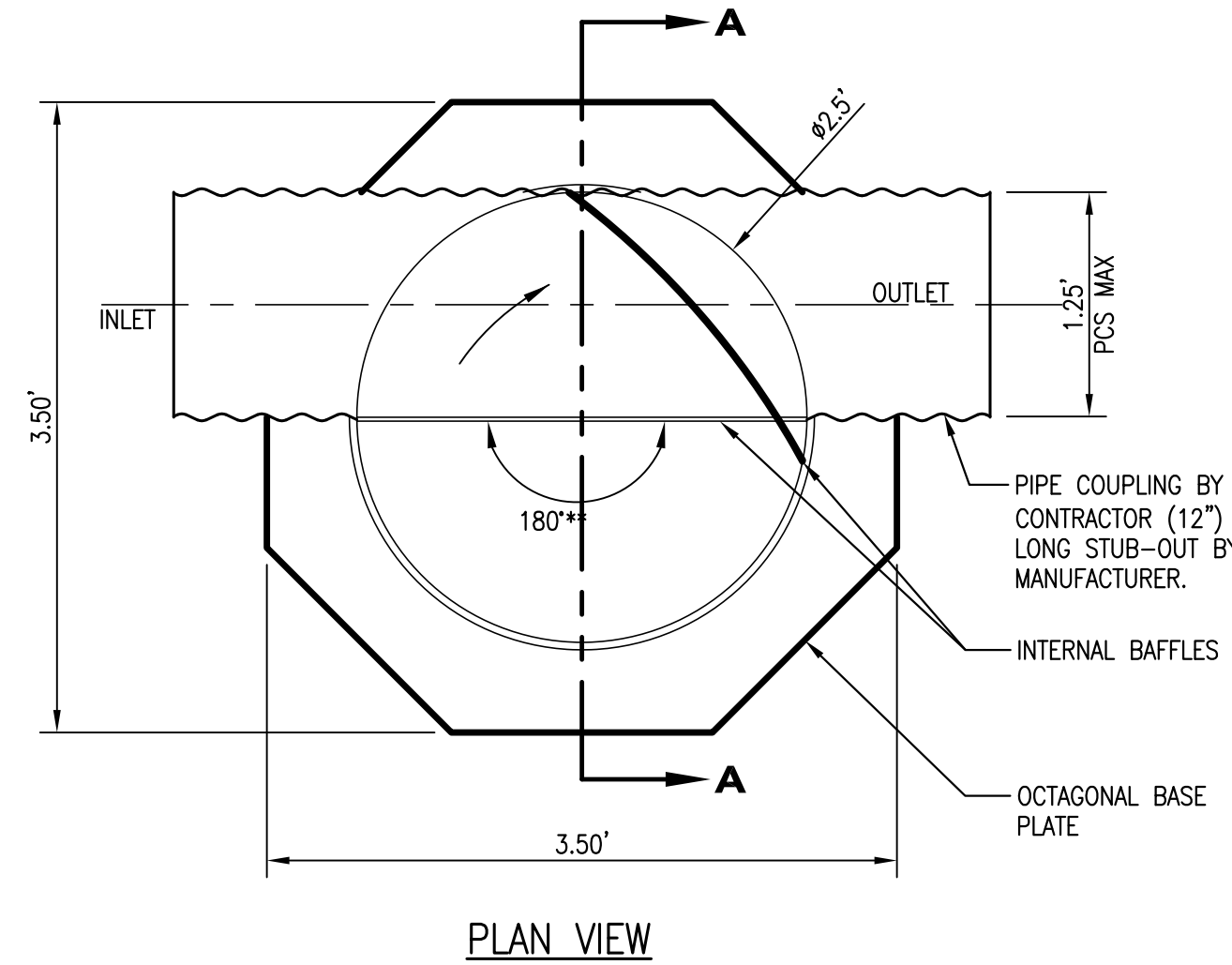
- DESIGN IN ACCORDANCE WITH AASHTO, LATEST EDITION.
- DESIGN LOAD HS25.
- EARTH COVER = 1' MAX.
- CONCRETE STRENGTH = 3,500 PSI
- REINFORCING STEEL = ASTM A615, GRADE 60.
- PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
- TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
- PROTECTIVE SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
- DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

REINFORCING TABLE				
ØSRPE RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4' 4' X 4'	26"	#5 Ø 12" OCEW	2,410
			#5 Ø 12" OCEW	1,780
30"	Ø 4'-6" 4'-6" X 4'-6"	32"	#5 Ø 12" OCEW	2,120
			#5 Ø 12" OCEW	1,530
36"	Ø 5' 5' X 5'	38"	#5 Ø 10" OCEW	1,890
			#5 Ø 10" OCEW	1,350
42"	Ø 5'-6" 5'-6" X 5'-6"	44"	#5 Ø 10" OCEW	1,720
			#5 Ø 9" OCEW	1,210
48"	Ø 6' 6' X 6'	50"	#5 Ø 9" OCEW	1,600
			#5 Ø 8" OCEW	1,110

** ASSUMED SOIL BEARING CAPACITY

GENERAL NOTES

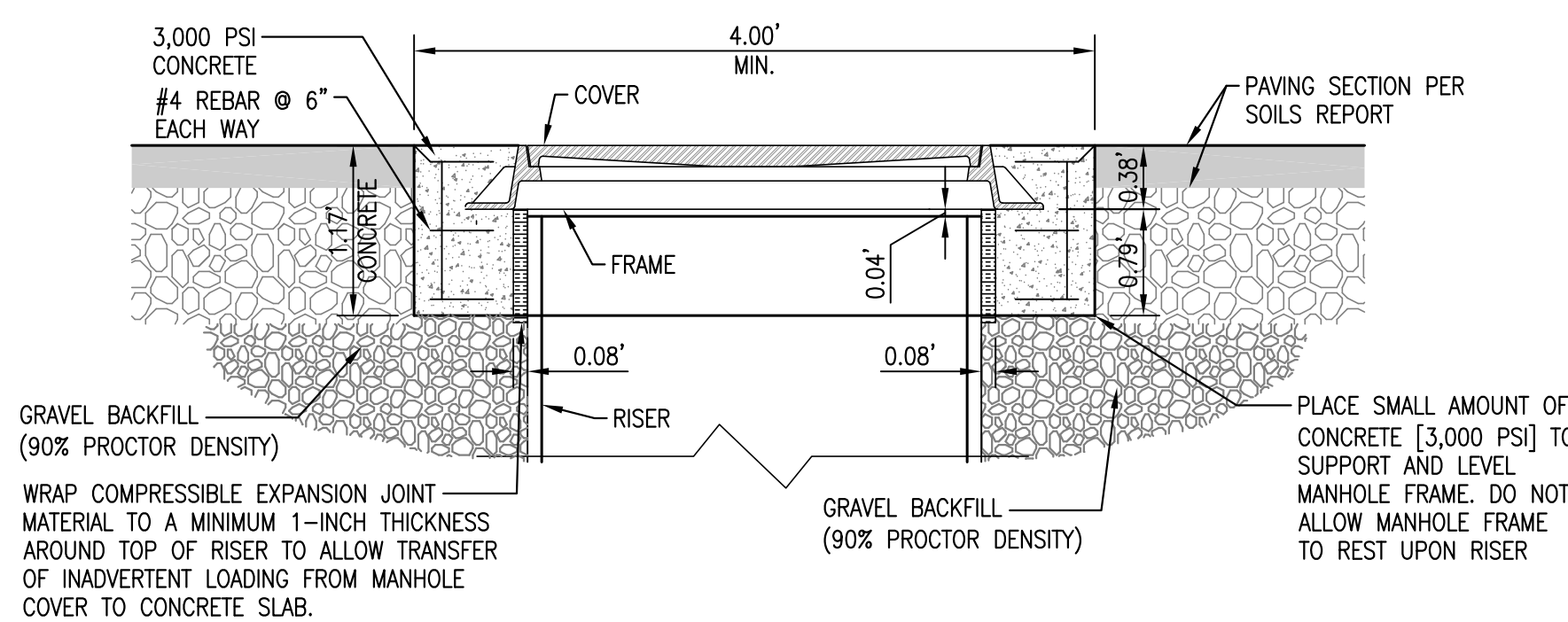
- BACKFILL SHALL EXTEND AT LEAST 18 INCHES OUTWARD FROM SWIRL CONCENTRATOR AND FOR THE FULL HEIGHT OF THE SWIRL CONCENTRATOR (INCLUDING RISER) EXTENDING LATERALLY TO UNDISTURBED SOILS. (SEE MANHOLE DETAIL BELOW)
- AS AN ALTERNATIVE, 42-INCH OD, HS-20/25 RATED PRECAST CONCRETE RINGS MAY BE SUBSTITUTED, 14-INCH THICKNESS MUST BE MAINTAINED.
- SEE MANUFACTURER'S SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- SEE SITE PLAN FOR ACTUAL SYSTEM ORIENTATION, WHICH MAY VARY FROM 90°, 180°, OR CUSTOM ANGLES TO MEET SITE CONDITIONS.



SECTION A-A

NOTE

IF TRAFFIC LOADING (HS-25) IS REQUIRED OR ANTICIPATED, A 4-FOOT [1.22 M] DIAMETER, 14-INCH [356 MM] THICK REINFORCED CONCRETE PAD MUST BE PLACED OVER THE STORMWATER TREATMENT SYSTEM RISER TO SUPPORT AND LEVEL THE MANHOLE FRAME, AS SHOWN. THE TOP OF RISER PIPE MUST BE WRAPPED WITH COMPRESSIBLE EXPANSION JOINT MATERIAL TO A MINIMUM 1-INCH [25 MM] THICKNESS TO ALLOW TRANSFER OF WHEEL LOADS FROM MANHOLE COVER TO CONCRETE SLAB. MANHOLE COVER SHALL BEAR ON CONCRETE SLAB AND NOT ON RISER PIPE. THE CONCRETE SLAB SHALL HAVE A MINIMUM STRENGTH OF 3,000 PSI [20 MPa] AND BE REINFORCED WITH #4 [13 MM] REINFORCING STEEL AS SHOWN. MINIMUM COVER OVER REINFORCING STEEL SHALL BE 1-INCH [25 MM]. TOP OF MANHOLE COVER AND CONCRETE SLAB SHALL BE LEVEL WITH FINISH GRADE.



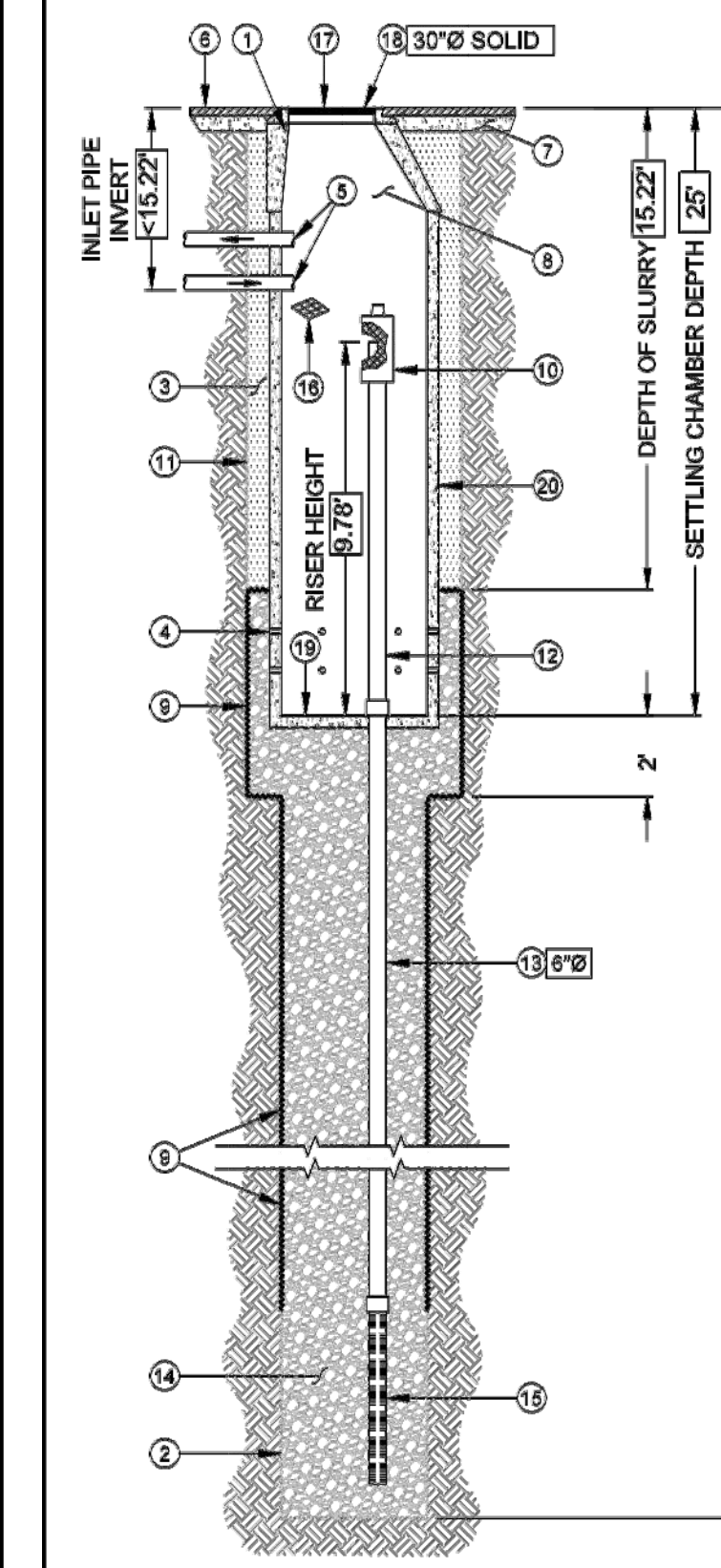
MANHOLE FRAME AND COVER DETAIL FOR TRAFFIC AREAS ONLY

AQUA-SWIRL MODEL AS-2 BY PCS

SCALE: NONE

IRON LOFTS
IRON LOFTS, LLC

The MaxWell® IV
DRAINAGE SYSTEM DETAILS AND SPECIFICATIONS
Iron Lofts - DMA 2
Riverside, CA



- ITEM NUMBERS**
- MANHOLE CONE - MODIFIED FLAT BOTTOM.
 - MIN 4" Ø DRILLED SHAFT.
 - STABILIZED BACKFILL - TWO-SACK SLURRY MIX.
 - 6 PERFORATIONS MINIMUM PER FOOT, 2 ROWS MINIMUM.
 - INLET PIPE/OUTLET PIPE (BY OTHERS). SEE SEPARATE PLAN FOR INVERT ELEVATIONS.
 - GRADED BASIN OR PAVING (BY OTHERS).
 - COMPACTED BASE MATERIAL, IF REQUIRED (BY OTHERS).
 - FREEBOARD DEPTH VARIES WITH INLET PIPE ELEVATION. INCREASE SETTLING CHAMBER DEPTH AS NEEDED TO MAINTAIN ALL INLET PIPE ELEVATIONS ABOVE RISER PIPE.
 - NON-WOVEN GEOTEXTILE SLEEVE - MIRAFI 140 NL, MIN. 6 FT Ø, HELD APPROX. 10 FEET OFF THE BOTTOM OF EXCAVATION.
 - PUREFLO® DEBRIS SHIELD - ROLLED 16 GA. STEEL X 24" LENGTH WITH VENTED ANTI-SIPHON AND INTERNAL 0.285" MAX. 5/16" FLATTENED EXPANDED STEEL SCREEN X 12" LENGTH. FUSION BONDED EPOXY COATED.
 - MIN. 6" Ø DRILLED SHAFT.
 - RISER PIPE - SCH. 40 PVC MATED TO DRAINAGE PIPE AT BASE SEAL.
 - DRAINAGE PIPE - ADS HIGHWAY GRADE OR SCH. 40 PVC WITH TRI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS. DIAMETER AS NOTED.
 - ROCK - WASHED, SIZED BETWEEN 3/8" AND 1-1/2".
 - FLOFAST® DRAINAGE SCREEN - SCH. 40 PVC 0.120" SLOTTED WELL SCREEN WITH MIN. 32 SLOTS PER ROW/FT. OVERALL LENGTH VARIES, UP TO 120" WITH TRI-B COUPLER.
 - ABSORBENT - HYDROPHOBIC PETROCHEMICAL SPONGE. MIN. 128 OZ. CAPACITY. TYPICAL, 2 PER CHAMBER.
 - FABRIC SEAL - U.V. RESISTANT GEOTEXTILE - TO BE REMOVED BY CUSTOMER AT PROJECT COMPLETION. GRATED ONLY.
 - BOLTED RING & GRATE/COVER - DIAMETER & TYPE AS SHOWN. CLEAN CAST IRON WITH WORKING "STORM WATER ONLY" IN RAISED LETTERS. BOLTED IN 2 LOCATIONS AND SECURE TO COME WITH MORTAR. RIM ELEVATION ±0.02' OF FLANS.
 - BASE SEAL - CONCRETE SLURRY.
 - PRE-CAST LINER - 4000 PSI CONCRETE 48" ID. X 54" OD. CENTER IN HOLE AND ALIGN SECTIONS TO MAXIMIZE BEARING SURFACE.

DATE: IV-4-SS-CA	REVISION BY: NJT	SCALE: N.T.S.
DRAWN ON: 07-20-23	REVISION DATE: 10-18-23	

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DRYWELL & DETENTION DESIGN CALCULATIONS

Drywell #2 (Combination of DW2A, DW2B, DW2C, DW2D)

Mitigation Volume, V_{dwp} :	5.881 C.F.	From BMP Design Worksheet
Infiltration Rate, $K_{inf,measured}$:	1.60 in/hr	Test Well W-10
Factor of Safety, FS:	3	
Number of Drywells, $DW_{quantity}$:	4 each	
DW Chamber s:	4 feet	
DW Chamber Area, DWC_{Area} :	12.57 square feet per foot	
DW Chamber Volume, DWC_{Volume} :	12.57 cubic feet per foot	
DW Chamber depth (from invert down):	9.78 linear feet	
DW Rock Shaft s:	4 feet	
DW Rock Shaft Area, DWR_{Area} :	12.57 square feet per foot	
DW Rock Shaft Volume, DWR_{Volume} :	12.57 cubic feet per foot	
DW Rock depth:	50.00 linear feet	
DW Infiltration depth:	59.78 linear feet	
DW Bottom Area, DWB_{Area} :	12.57 square feet per foot	
T (Maximum Drawdown Time):	48 hr	
CMP Diameter (detention):	6 feet	
CMP Volume:	28.2 cubic feet per foot	
CMP Length:	156 linear feet	

Determine Design Infiltration Rate: $K_{inf,design}$

$$K_{inf,design} = K_{inf,measured} + FS$$

$$K_{inf,design} = 0.53 \text{ in/hr} + 0.000012 \text{ ft/sec}$$

Determine Minimum Infiltration Surface Area, A_{min}

$$A_{min} = (V_{dwp} \times 12 \text{ in/ft}) \div (T \times K_{inf,design})$$

$$A_{min} = 2,757 \text{ S.F.}$$

Determine Infiltration Surface Area, A_{actual}

$$A_{actual} = (DW_{infiltration,depth} \times DWR_{Area}) + (DWB_{Area} \times DW_{quantity})$$

$$A_{actual} = 3,066 \text{ S.F.}$$

Determine Volume of Drywell, $V_{drywell}$

$$V_{drywell} = (DWC_{Volume} \times DW_{chamber,depth}) + (DWR_{Volume} \times DW_{rock,depth} \times 0.40) \times DW_{quantity}$$

$$V_{drywell} = 1,497 \text{ C.F.}$$

Determine Volume Remaining to Detain in CMP, V_{design}

$$V_{design} = V_{dwp} - V_{drywell}$$

$$V_{design} = 4,384 \text{ C.F.}$$

Determine CMP Detention Volume, $V_{CMP,detain}$

$$V_{CMP,detain} = CMP_{Volume} \times CMP_{Length}$$

$$V_{CMP,detain} = 4,412 \text{ C.F.}$$

Determine DW & CMP Volume, V_{design}

$$V_{design} = V_{CMP,detain} + V_{drywell}$$

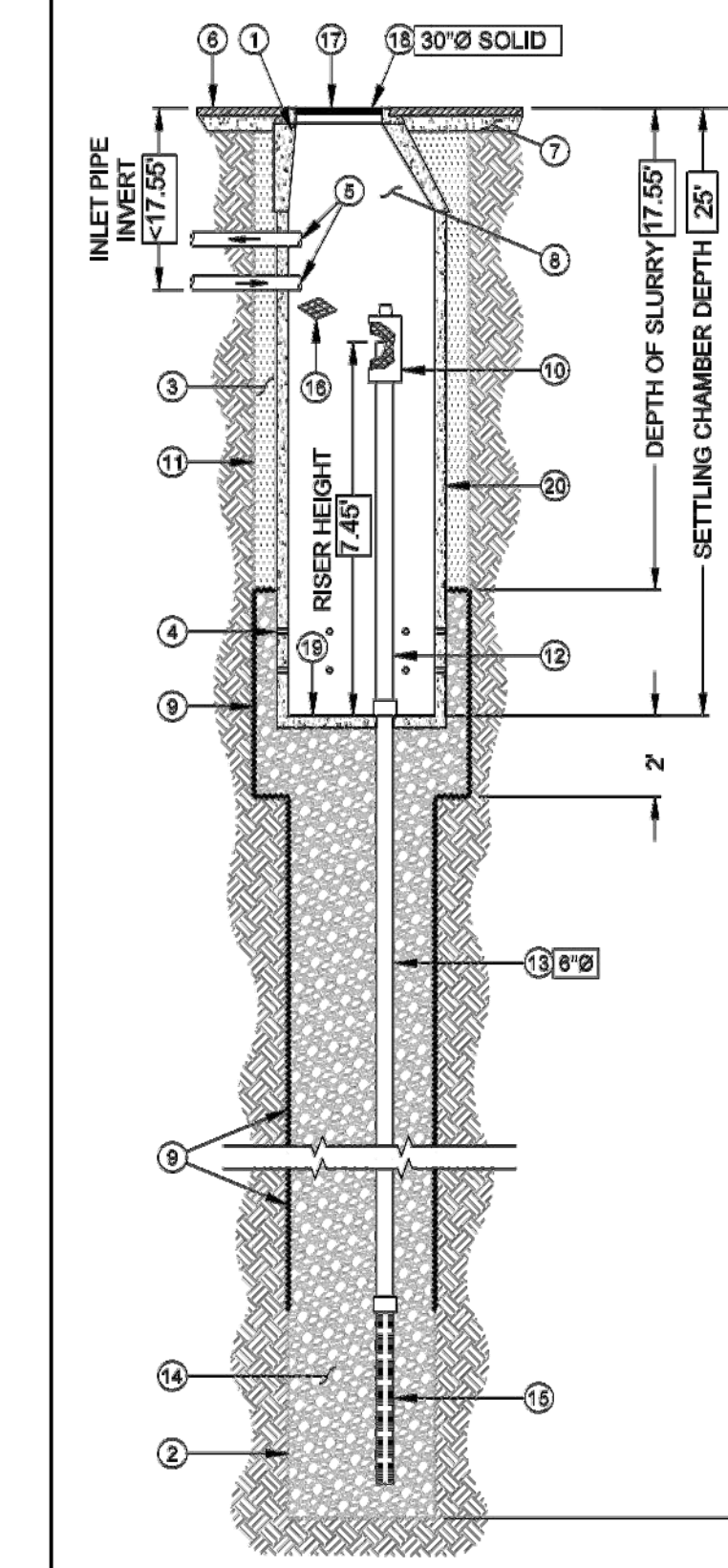
$$V_{design} = 5,909 \text{ C.F.}$$

Determine Drawdown Time, T_{actual}

$$T_{actual} = (V_{design} \times 12 \text{ in/ft}) \div (A_{actual} \times K_{inf,design})$$

$$T_{actual} = 43.81 \text{ hr}$$

The MaxWell® IV
DRAINAGE SYSTEM DETAILS AND SPECIFICATIONS
Iron Lofts - DMA 1
Riverside, CA



- ITEM NUMBERS**
- MANHOLE CONE - MODIFIED FLAT BOTTOM.
 - MIN 4" Ø DRILLED SHAFT.
 - STABILIZED BACKFILL - TWO-SACK SLURRY MIX.
 - 6 PERFORATIONS MINIMUM PER FOOT, 2 ROWS MINIMUM.
 - INLET PIPE/OUTLET PIPE (BY OTHERS). SEE SEPARATE PLAN FOR INVERT ELEVATIONS.
 - GRADED BASIN OR PAVING (BY OTHERS).
 - COMPACTED BASE MATERIAL, IF REQUIRED (BY OTHERS).
 - FREEBOARD DEPTH VARIES WITH INLET PIPE ELEVATION. INCREASE SETTLING CHAMBER DEPTH AS NEEDED TO MAINTAIN ALL INLET PIPE ELEVATIONS ABOVE RISER PIPE.
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 - PUREFLO® DEBRIS SHIELD - ROLLED 16 GA. STEEL X 24" LENGTH WITH VENTED ANTI-SIPHON AND INTERNAL 0.285" MAX. 5/16" FLATTENED EXPANDED STEEL SCREEN X 12" LENGTH. FUSION BONDED EPOXY COATED.
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 - DRAINAGE PIPE - ADS HIGHWAY GRADE OR SCH. 40 PVC WITH TRI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS. DIAMETER AS NOTED.
 - ROCK - WASHED, SIZED BETWEEN 3/8" AND 1-1/2".
 - FLOFAST® DRAINAGE SCREEN - SCH. 40 PVC 0.120" SLOTTED WELL SCREEN WITH MIN. 32 SLOTS PER ROW/FT. OVERALL LENGTH VARIES, UP TO 120" WITH TRI-B COUPLER.
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 - BOLTED RING & GRATE/COVER - DIAMETER & TYPE AS SHOWN. CLEAN CAST IRON WITH WORKING "STORM WATER ONLY" IN RAISED LETTERS. BOLTED IN 2 LOCATIONS AND SECURE TO COME WITH MORTAR. RIM ELEVATION ±0.02' OF FLANS.
 - BASE SEAL - CONCRETE SLURRY.
 - PRE-CAST LINER - 4000 PSI CONCRETE 48" ID. X 54" OD. CENTER IN HOLE AND ALIGN SECTIONS TO MAXIMIZE BEARING SURFACE.

DATE: IV-4-SS-CA	REVISION BY: NJT	SCALE: N.T.S.
DRAWN ON: 07-20-23	REVISION DATE: 10-18-23	

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DRYWELL & DETENTION DESIGN CALCULATIONS

Drywell #1 (Combination of DW1A, DW1B, DW1C, DW1D)

Mitigation Volume, V_{dwp} :	5.825 C.F.	From BMP Design Worksheet
Infiltration Rate, $K_{inf,measured}$:	1.60 in/hr	Test Well W-8
Factor of Safety, FS:	3	
Number of Drywells, $DW_{quantity}$:	4 each	
DW Chamber s:	4 feet	
DW Chamber Area, DWC_{Area} :	12.57 square feet per foot	
DW Chamber Volume, DWC_{Volume} :	12.57 cubic feet per foot	
DW Chamber depth (from invert down):	7.45 linear feet	
DW Rock Shaft s:	4 feet	
DW Rock Shaft Area, DWR_{Area} :	12.57 square feet per foot	
DW Rock Shaft Volume, DWR_{Volume} :	12.57 cubic feet per foot	
DW Rock depth:	50.00 linear feet	
DW Infiltration depth:	57.45 linear feet	
DW Bottom Area, DWB_{Area} :	12.57 square feet per foot	
T (Maximum Drawdown Time):	48 hr	
CMP Diameter (detention):	8 feet	
CMP Volume:	50.2 cubic feet per foot	
CMP Length:	90 linear feet	

Determine Design Infiltration Rate: $K_{inf,design}$

$$K_{inf,design} = K_{inf,measured} + FS$$

$$K_{inf,design} = 0.53 \text{ in/hr} + 0.000012 \text{ ft/sec}$$

Determine Minimum Infiltration Surface Area, A_{min}

$$A_{min} = (V_{dwp} \times 12 \text{ in/ft}) \div (T \times K_{inf,design})$$

$$A_{min} = 2,730 \text{ S.F.}$$

Determine Infiltration Surface Area, A_{actual}

$$A_{actual} = (DW_{infiltration,depth} \times DWR_{Area}) + (DWB_{Area} \times DW_{quantity})$$

$$A_{actual} = 2,839 \text{ S.F.}$$

Determine Volume of Drywell, $V_{drywell}$

$$V_{drywell} = (DWC_{Volume} \times DW_{chamber,depth}) + (DWR_{Volume} \times DW_{rock,depth} \times 0.40) \times DW_{quantity}$$

$$V_{drywell} = 1,380 \text{ C.F.}$$

Determine Volume Remaining to Detain in CMP, V_{design}

$$V_{design} = V_{dwp} - V_{drywell}$$

$$V_{design} = 4,445 \text{ C.F.}$$

Determine CMP Detention Volume, $V_{CMP,detain}$

$$V_{CMP,detain} = CMP_{Volume} \times CMP_{Length}$$

$$V_{CMP,detain} = 4,495 \text{ C.F.}$$

Determine DW & CMP Volume, V_{design}

$$V_{design} = V_{CMP,detain} + V_{drywell}$$

$$V_{design} = 5,875 \text{ C.F.}$$

Determine Drawdown Time, T_{actual}

$$T_{actual} = (V_{design} \times 12 \text{ in/ft}) \div (A_{actual} \times K_{inf,design})$$

$$T_{actual} = 44.98 \text{ hr}$$

MAXWELL IV DRAINAGE SYSTEM (TORRENT RESOURCES)

SCALE: NONE

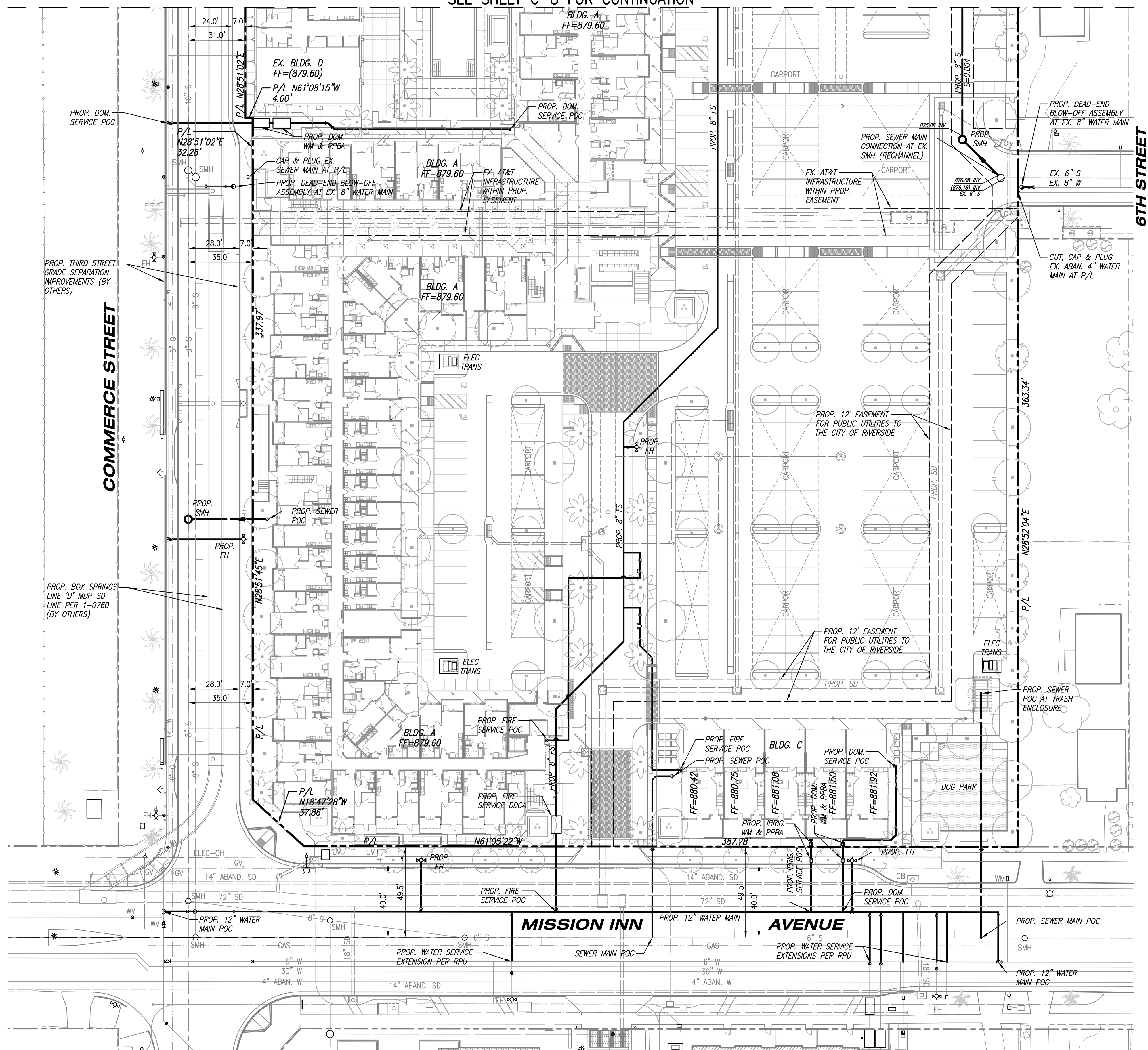
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C-6: PRELIMINARY LID BMP DETAILS
RIVERSIDE, CALIFORNIA

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Ave. - Suite 200
Irvine, California 92614
Tel (949) 756-6440

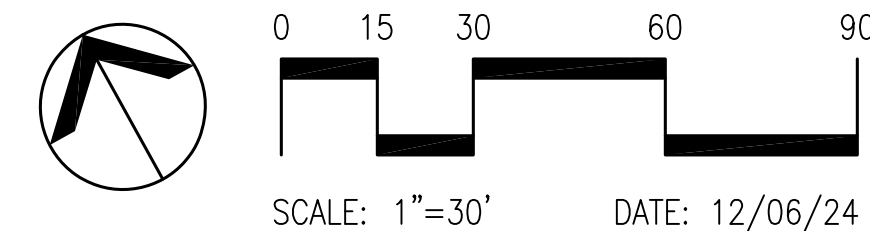
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SEE SHEET C-8 FOR CONTINUATION



NOTES

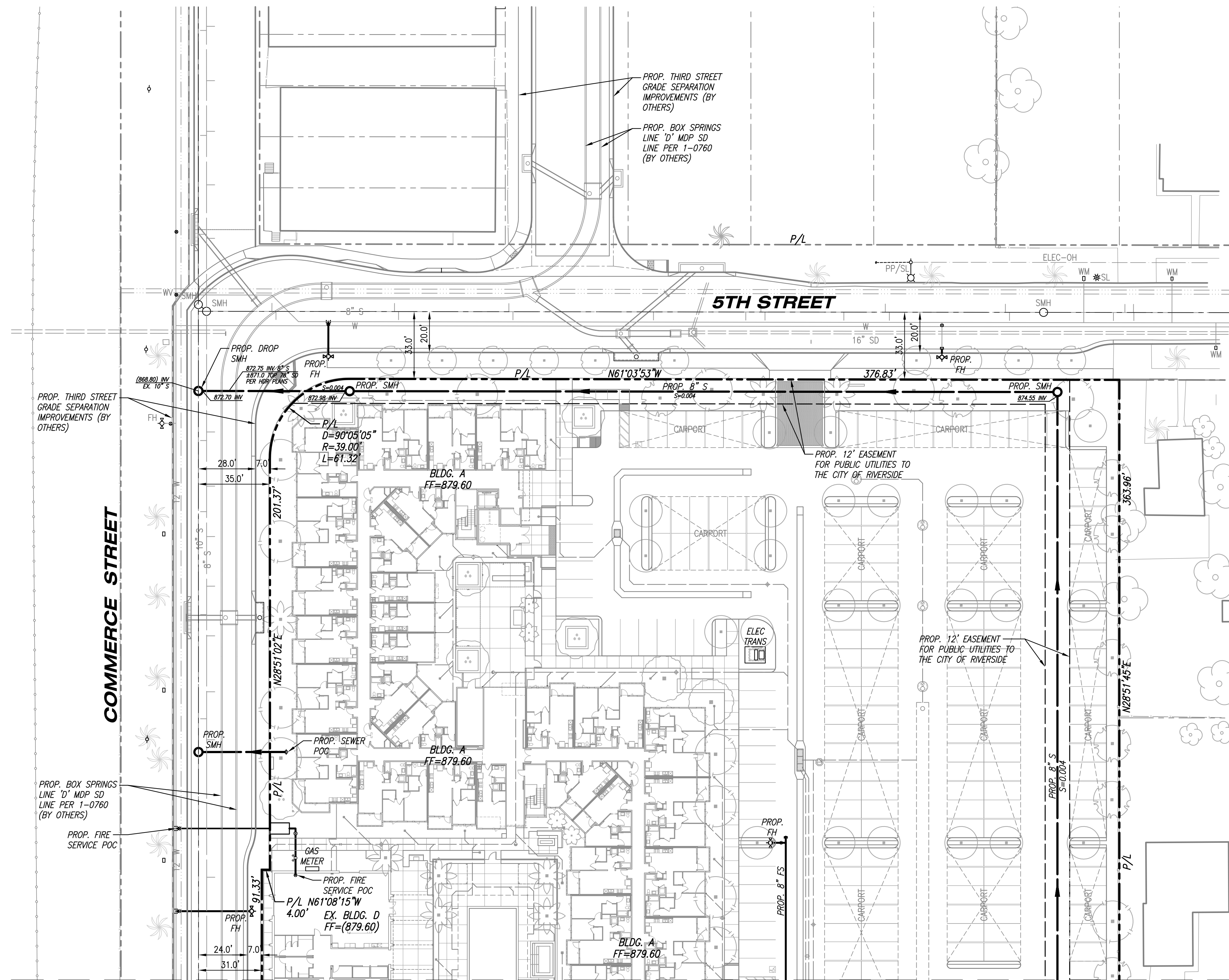
- VACATION OF 6TH ST. WILL REQUIRE THE ABANDONMENT OF THE EXISTING 8" WATER MAIN IN THE EXISTING STREET RIGHT OF WAY. ADDITIONAL ANALYSES WILL BE NEEDED TO DETERMINE IF THE ABANDONMENT OF THAT SECTION OF MAIN WILL TRIGGER ANY ADDITIONAL OFF-SITE UPGRADES OR THE NEED TO LOOP THE MAIN THROUGH AN EASEMENT WITHIN THE PROJECT.
- THE 6" WATER MAIN IN MISSION INN AVE. REQUIRES UPGRADE TO 12" FROM COMMERCE ST. ACROSS THE PROJECT FRONTAGE AT A MINIMUM, AND POSSIBLY UP TO PARK AVE. DEPENDING ON REQUIRED FIRE FLOW VOLUME AND IMPACTS FROM POTENTIAL ABANDONMENT OF THE 6TH ST. WATER MAIN.



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C-7: PRELIMINARY WET UTILITY PLAN
RIVERSIDE, CALIFORNIA

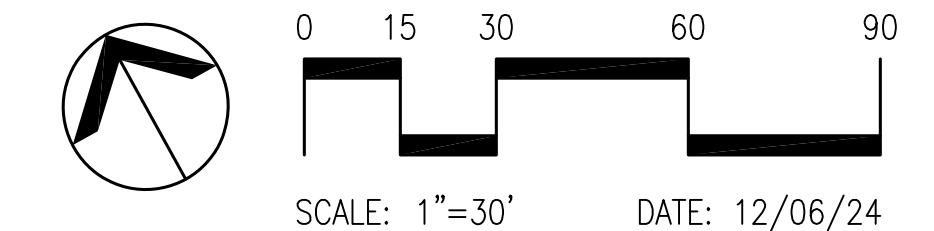
KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Ave. - Suite 200
Irvine, California 92614



SEE SHEET C-7 FOR CONTINUATION

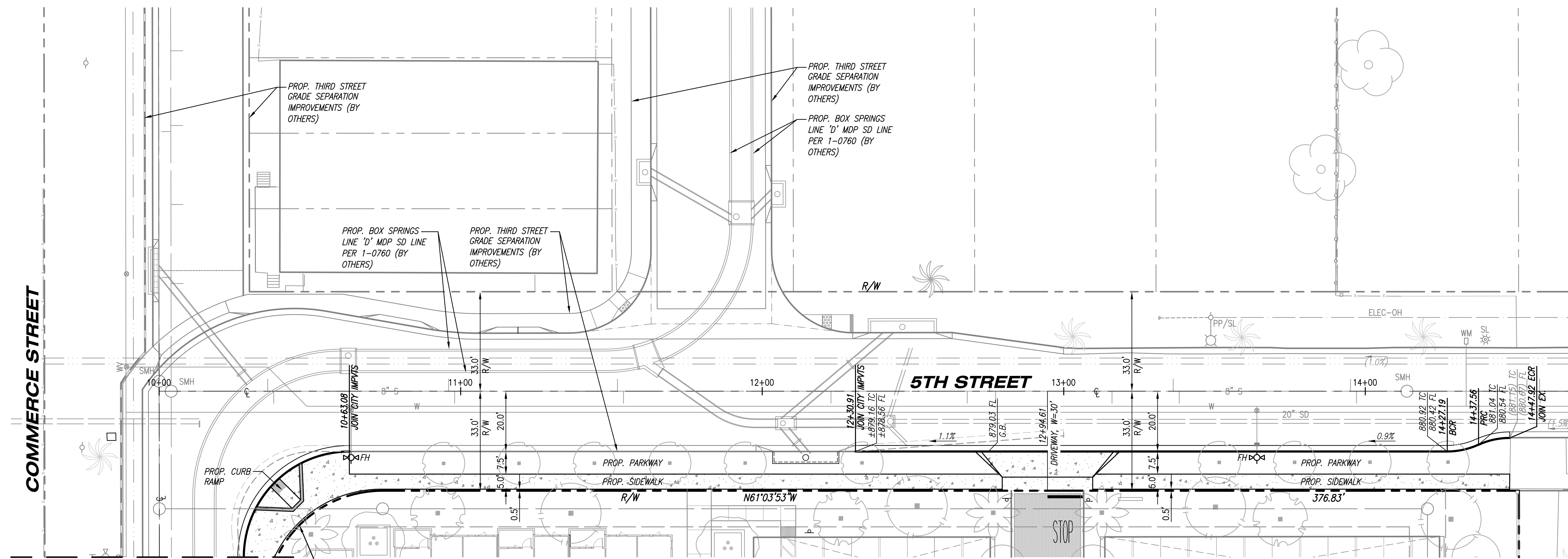
IRON LOFTS
IRON LOFTS, LLC

C-8: PRELIMINARY WET UTILITY PLAN
RIVERSIDE, CALIFORNIA



KHR ASSOCIATES
 CONSULTING ENGINEERS/SURVEYORS/PLANNERS
 17530 Von Karman Ave. - Suite 200
 Irvine, California 92614
 Tel (949) 756-6440

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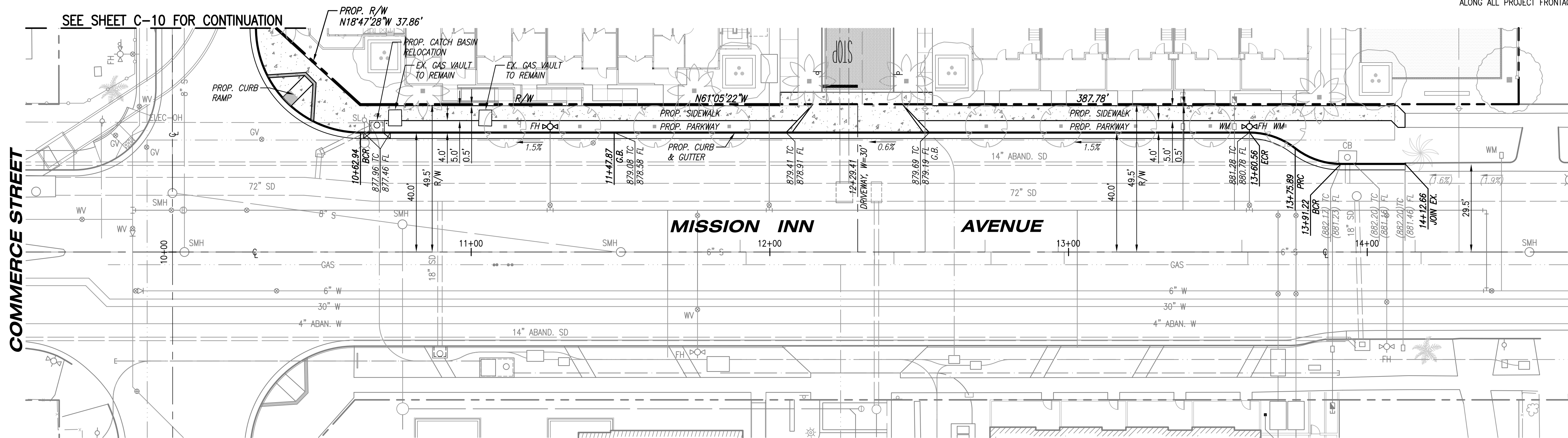


SEE SHEET C-10 FOR CONTINUATION

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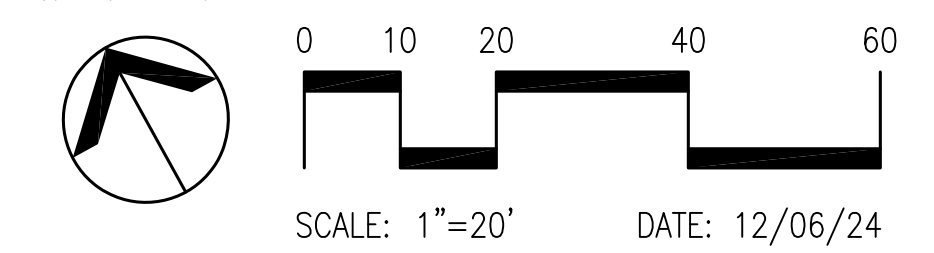
GENERAL NOTES

1. THE STREET IMPROVEMENTS SHOWN HEREON ALONG COMMERCE ST. AND 5TH ST. ARE PER HDR'S PLANS, AS PART OF THE CITY'S THIRD STREET GRADE SEPARATION PROJECT. THE STREET IMPROVEMENT SCOPE OF WORK FOR THE IRON LOFTS DEVELOPMENT WILL INCLUDE TYING INTO HDR'S STREET IMPROVEMENTS AT KEY LOCATIONS AND CONTINUING ALONG THE IRON LOFTS' FRONTAGES ALONG THE NORTH SIDE OF MISSION INN AVE., THE EAST SIDE OF COMMERCE ST., AND THE SOUTH SIDE OF 5TH ST., AS SHOWN HEREON.
2. THE ABANDONED RAIL LINE ALONG COMMERCE ST. SHALL ALSO BE REMOVED PER HDR'S PLANS.
3. REHABILITATION OF EXISTING PAVEMENT TO A MINIMUM OF STREET CENTERLINE ALONG ALL PROJECT FRONTAGES TO PUBLIC WORKS SPECIFICATIONS.



SEE SHEET C-10 FOR CONTINUATION

PROP. R/W
N18°47'28\"/>

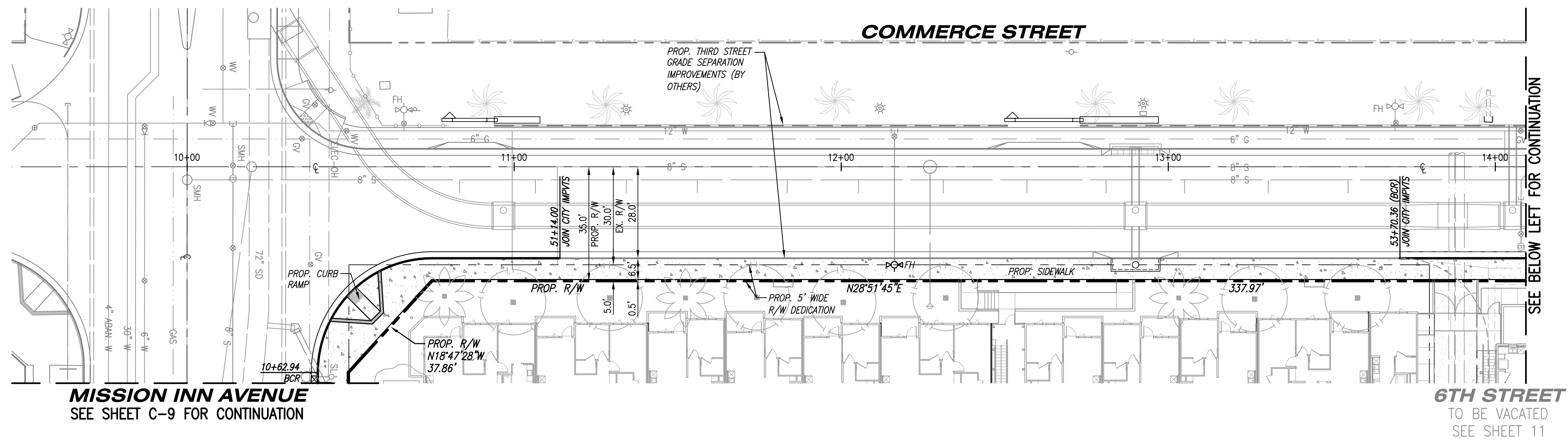


IRON LOFTS
IRON LOFTS, LLC

C-9: PRELIMINARY STREET PLAN
RIVERSIDE, CALIFORNIA

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Ave. - Suite 200
Irvine, California 92614
Tel (949) 756-6440

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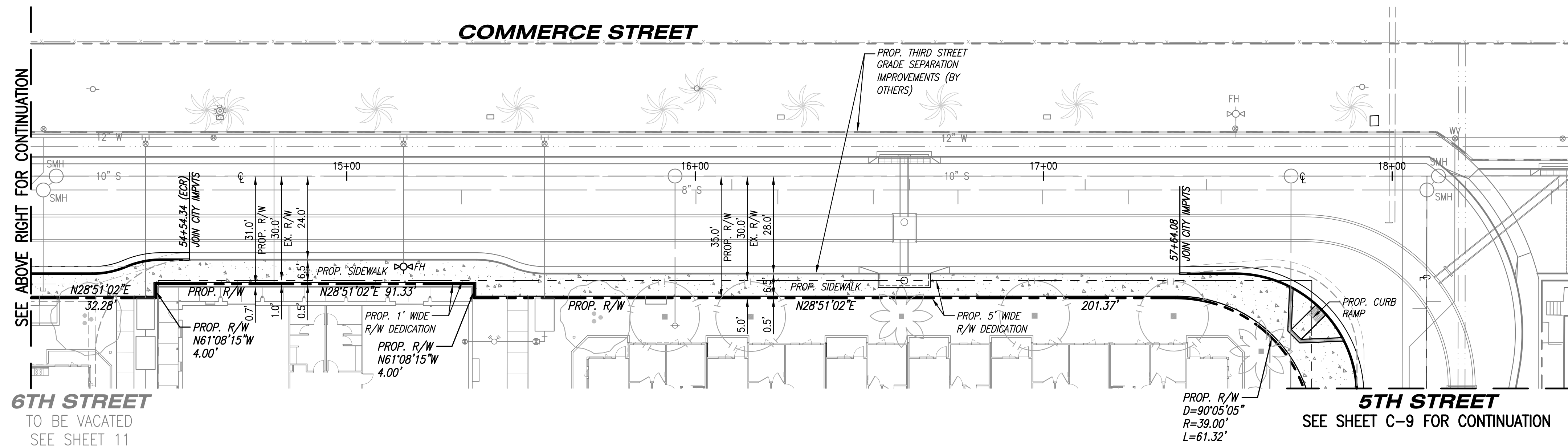


MISSION INN AVENUE
SEE SHEET C-9 FOR CONTINUATION

6TH STREET
TO BE VACATED
SEE SHEET 11

GENERAL NOTES

1. THE STREET IMPROVEMENTS SHOWN HEREON ALONG COMMERCE ST. AND 5TH ST. ARE PER HDR'S PLANS, AS PART OF THE CITY'S THIRD STREET GRADE SEPARATION PROJECT. THE STREET IMPROVEMENT SCOPE OF WORK FOR THE IRON LOFTS DEVELOPMENT WILL INCLUDE TYING INTO HDR'S STREET IMPROVEMENTS AT KEY LOCATIONS AND CONTINUING ALONG THE IRON LOFTS' FRONTAGES ALONG THE NORTH SIDE OF MISSION INN AVE., THE EAST SIDE OF COMMERCE ST., AND THE SOUTH SIDE OF 5TH ST., AS SHOWN HEREON.
2. THE ABANDONED RAIL LINE ALONG COMMERCE ST. SHALL ALSO BE REMOVED PER HDR'S PLANS.
3. REHABILITATION OF EXISTING PAVEMENT TO A MINIMUM OF STREET CENTERLINE ALONG ALL PROJECT FRONTAGES TO PUBLIC WORKS SPECIFICATIONS.

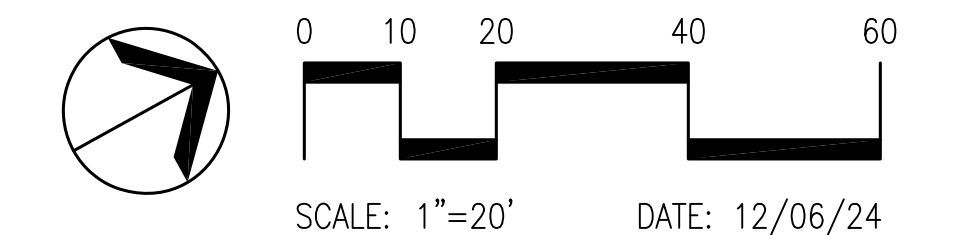


6TH STREET
TO BE VACATED
SEE SHEET 11

5TH STREET
SEE SHEET C-9 FOR CONTINUATION

IRON LOFTS
IRON LOFTS, LLC

C-10: PRELIMINARY STREET PLAN
RIVERSIDE, CALIFORNIA

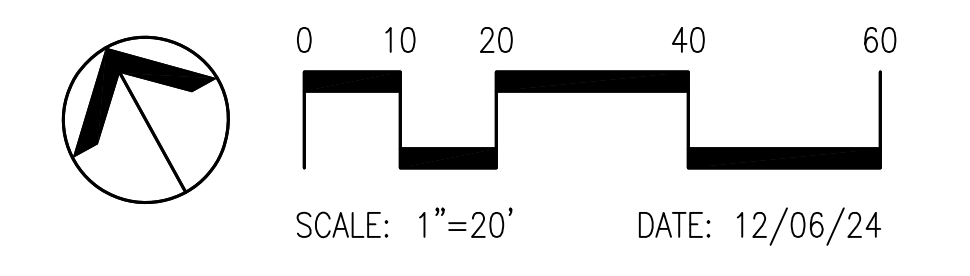
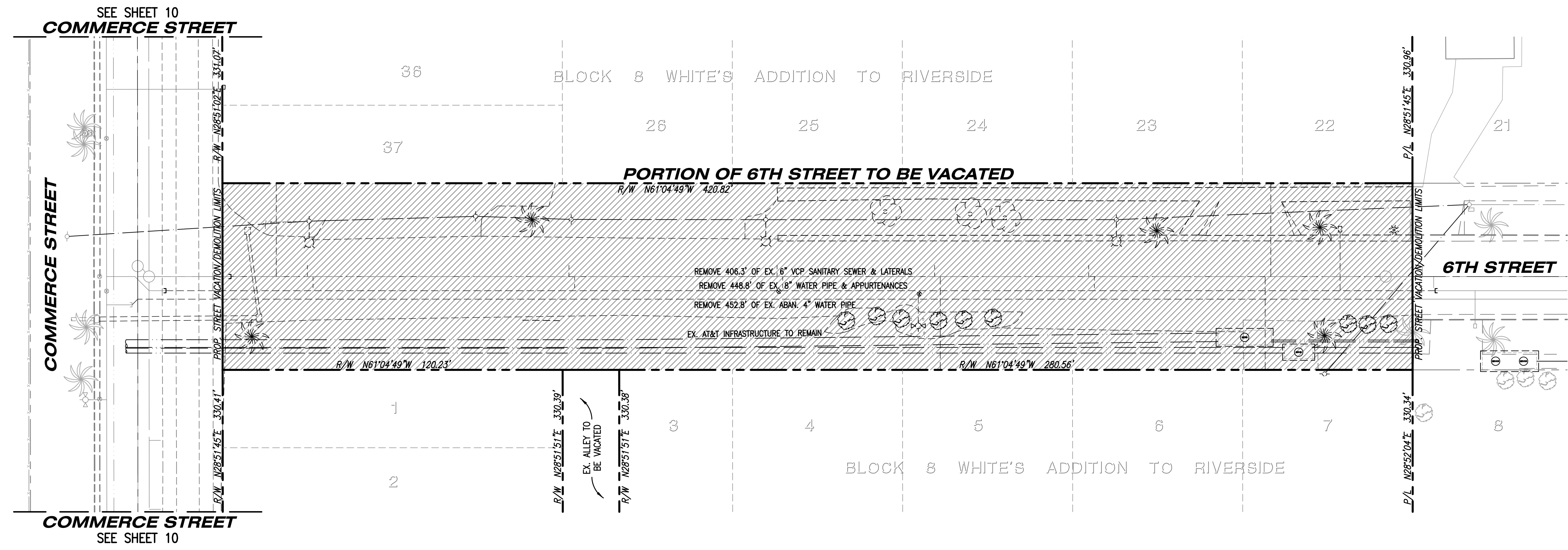


KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Ave. - Suite 200
Irvine, California 92614
Tel (949) 756-6440

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NOTES

1. ALL EXISTING IMPROVEMENTS (I.E., HARDSCAPE, LANDSCAPE, UTILITIES, ETC.) WITHIN THAT PORTION OF 6TH STREET TO BE VACATED SHALL BE DEMOLISHED AND REMOVED.
2. ALL EXISTING OVERHEAD POWER LINES ALONG THAT PORTION OF 6TH STREET TO BE VACATED SHALL BE UNDERGROUNDED.

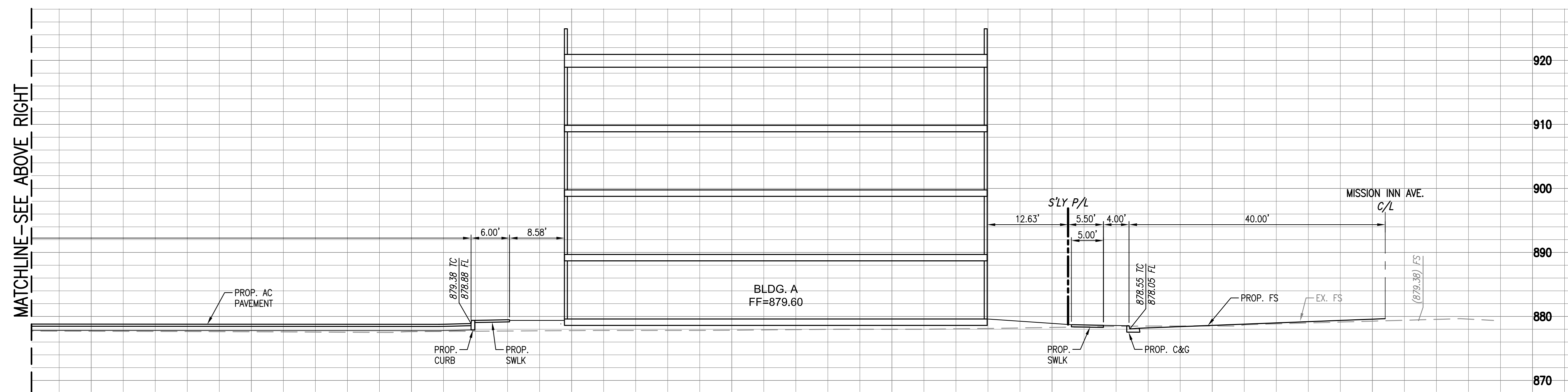
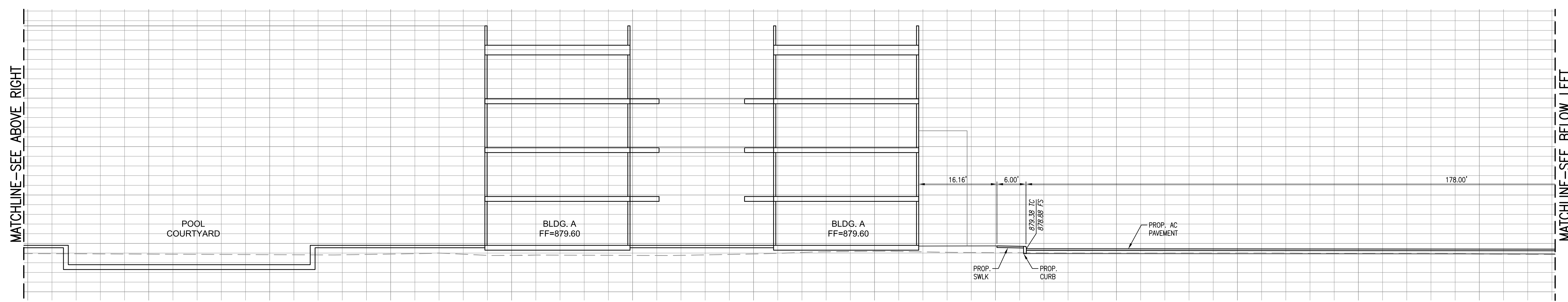
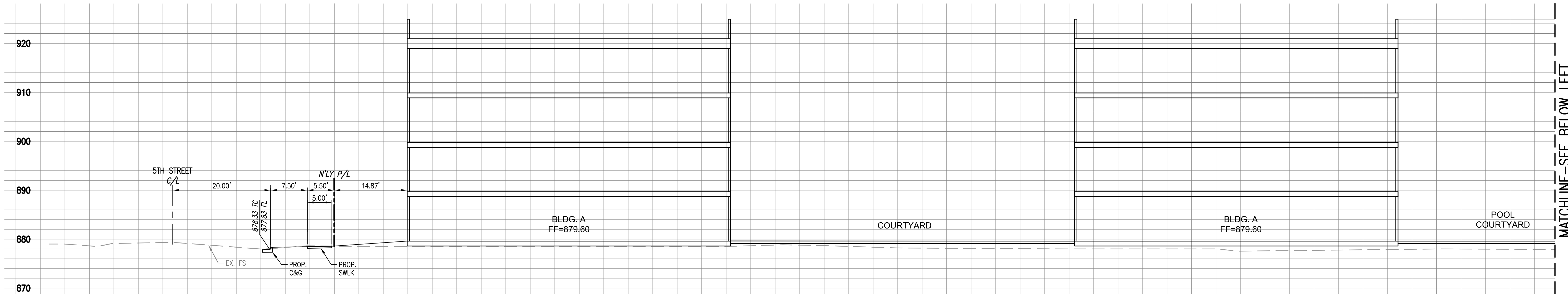


IRON LOFTS
IRON LOFTS, LLC

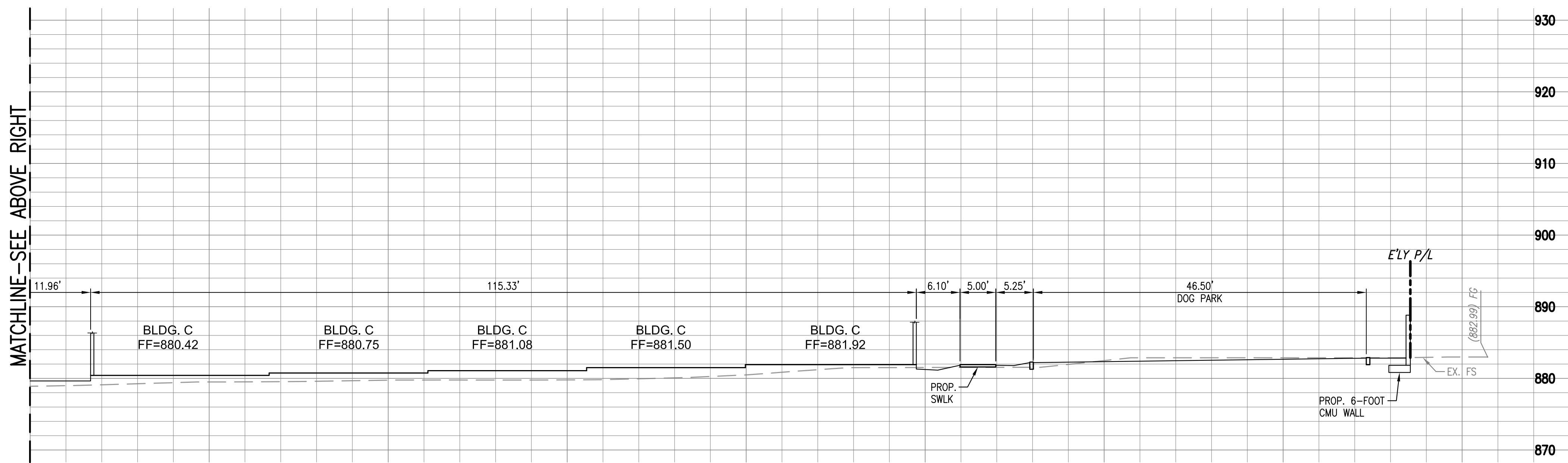
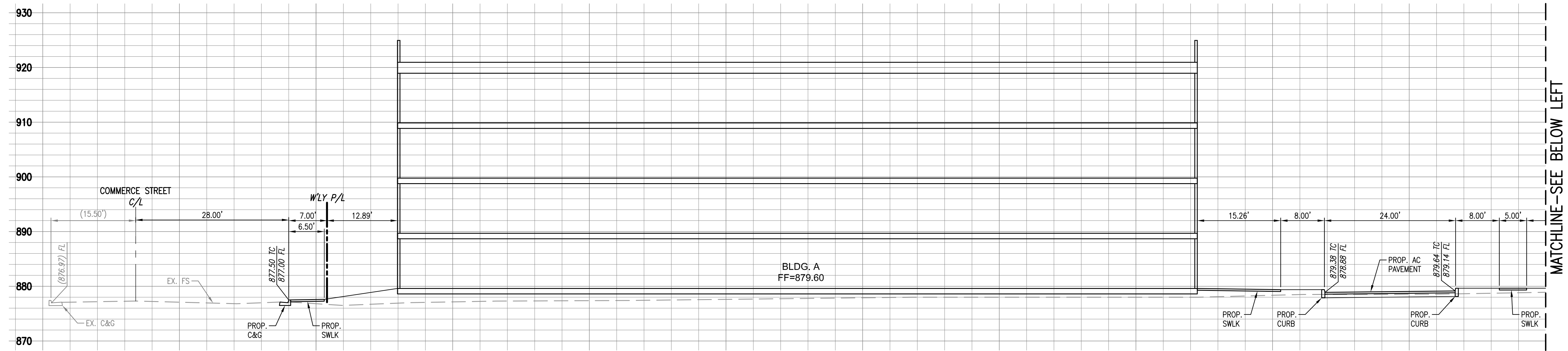
C-11: PRELIMINARY 6TH STREET VACATION & DEMOLITION PLAN
RIVERSIDE, CALIFORNIA

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Ave. - Suite 200
Irvine, California 92614
Tel (949) 756-6440

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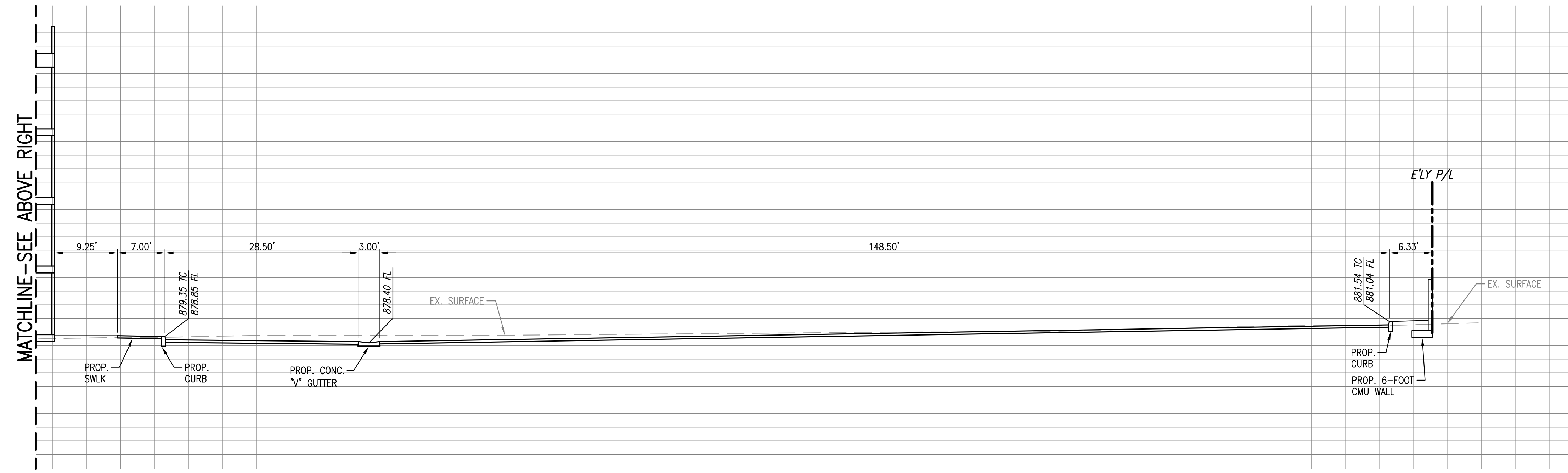
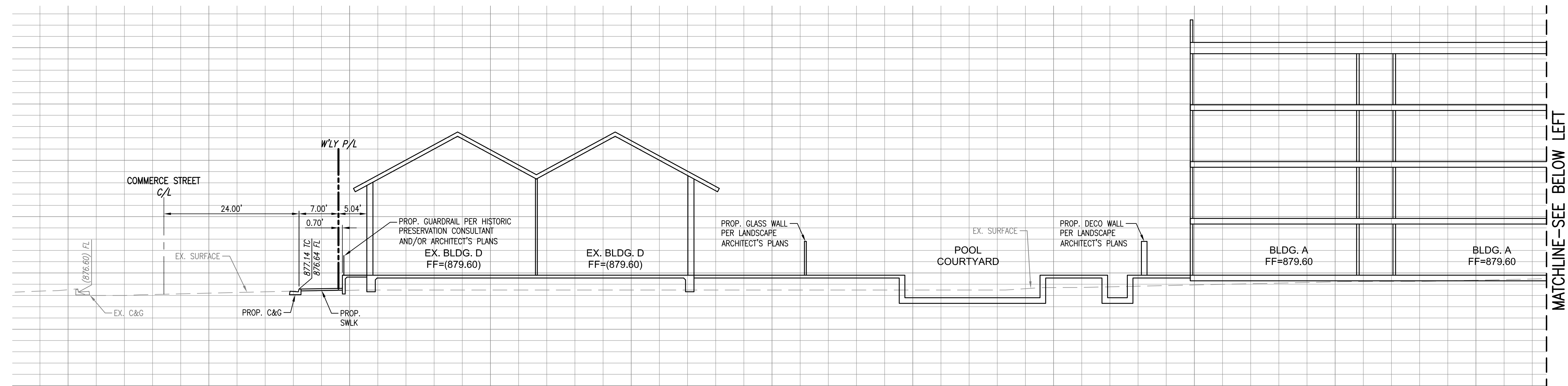


SECTION "A-A"
 HORIZONTAL: 1"=10'
 VERTICAL: 1"=10'



SECTION "B-B"

HORIZONTAL: 1"=10'
 VERTICAL: 1"=10'



SECTION "C-C"

HORIZONTAL: 1"=10'
VERTICAL: 1"=10'

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

April 11, 2023
(Revised June 16, 2023)

Iron Lofts, LLC
c/o REALM
1201 Dove Street
Newport Beach, CA 92660

Attention: Mr. Todd Cadwell

Subject: Infiltration Study
Proposed Residential Development – Iron Lofts
NEC Mission Inn Avenue and Commerce Street
Riverside, California
GPI Project No. 3044.11

Dear Mr. Cadwell:

This report presents the results of field exploration and infiltration testing performed by Geotechnical Professionals Inc. (GPI) for the design of stormwater infiltration systems at the subject site. This report supplements our Geotechnical Investigation (GPI, 2023) report dated February 1, 2023. The testing was performed in general accordance with the Riverside County – Low Impact Development BMP Design Handbook (Riverside, 2011) and our proposal dated March 16, 2023.

This report was revised to include additional field exploration and infiltration testing for the proposed dry well systems at the site.

PROJECT DESCRIPTION

We understand that you propose to construct a new apartment development that will include infrastructure to facilitate the infiltration of stormwater. Based on preliminary information provided by the Project Civil Engineer, KHR Associates, stormwater at the site will be infiltrated into the subsurface soils using a perforated CMP system on Site 2 (North Site), and either a perforated CMP system or dry well system on Site 1 (South Site). The infiltration systems will be located in the parking areas on the south side of the apartment buildings. The CMP infiltration chambers are planned to be founded at depths approximately 12 feet, and the dry wells are planned to be founded at least 30 feet below existing grades. The locations of the proposed stormwater systems are shown on the attached Figure 1, Site Plan.

SCOPE OF SERVICES

Our scope of services consisted of subsurface explorations, field infiltration testing, laboratory testing, engineering analysis and the preparation of this report.

The subsurface conditions at the site near the proposed stormwater infiltration systems were investigated by drilling and sampling five hollow stem auger borings (B-8 to B-12) to depths of approximately 23½ to 61 feet below existing grades. The infiltration characteristics of the subsurface soils near the invert depth of the proposed systems were investigated by installing 6 infiltration test wells (W-1 to W-6) at depths of approximately 12 feet, and 4 test wells (W-7 to W-10) at depths of approximately 50 feet below existing grades. The approximate locations of the subsurface explorations and infiltration tests are shown in Figure 1. A description of the field procedures and logs of the explorations are presented in Appendix A.

Laboratory soil tests were performed on select representative samples as an aid in soil classification and to evaluate the engineering properties of the soils. The limited geotechnical laboratory testing program included determinations of moisture content and dry density, and grain size analyses. Laboratory testing procedures and results are summarized in Appendix B.

SUBSURFACE CONDITIONS

The soils encountered in our explorations near the invert depths of the proposed systems consisted of predominately layered silty sands and sandy silts with limited lenses of clayey sands and clayey silts at depths between approximately 30 and 61 feet below existing grades. In general, the soils were predominately slightly moist to moist within the upper 20 feet and moist to very moist between 30 feet and the depths explored. The soils were predominately loose to medium dense and stiff to very stiff to the depths explored.

Groundwater was not encountered in our explorations to depths of 61 feet below existing grades in our recent explorations at the site. Groundwater was reported by others (GSI 2020) to be greater than 100 feet below existing grade in 2009 at a nearby property.

INFILTRATION TESTING

We performed ten infiltration tests to evaluate the infiltration characteristics for the proposed systems. The infiltration testing and construction of the wells were performed in general accordance with the County of Riverside Department of Environmental Health Guidelines (Riverside, 2011).

The test wells were constructed with 2-inch diameter slotted pipe in boreholes excavated using an 8-inch diameter hollow stem auger. The annular space between the perforated casing and the borehole was loosely filled with ¾-inch diameter gravel.

Each test well was presoaked by placing at least 5 gallons of water into the test hole and waiting for the water to fully drain. Testing was performed the same day as the presoaking process. After pre-soaking, each test was evaluated by our field engineer to confirm the tests met the County's sandy soil criteria (6 inches of water seeps away in less than 25

minutes). The test wells were then repeatedly filled to a predetermined target depth above the bottom and the water level drop and duration of each drop were recorded.

The measured infiltration rates were calculated using the drop in water level over the test increment time. The last reading for each well was used to determine the measured infiltration rate, expressed in inches per hour and is provided below:

Tests for CMP Units

Basin	Test Well	Approximate Depth of Well Tested (feet)	Measured Infiltration Rate (inches/hour)
Site 1	W-1	11.8	1.0
	W-2	11.7	0.7
	W-3	11.8	0.8
	W-4	11.6	1.3
Site 2	W-5	11.4	2.4
	W-6	11.6	6.8

Tests for Dry Wells

Basin	Test Well	Approximate Depth of Well Tested (feet)	Measured Infiltration Rate (inches/hour)
Site 1	W-7	45-50	1.3
	W-8	40-50	1.5
	W-9	45-50	1.6
	W-10	40-50	1.6

CONCLUSIONS AND RECOMMENDATIONS

The soils encountered in our explorations generally appear to be layered and have moderately favorable stormwater infiltration characteristics.

The rates shown on the tables above may be applied to the soils from 10 feet to 20 feet below existing grades for the shallow CMP units and from 35 to 55 feet below existing grades for the dry wells and at the locations tested. If rates outside of these depths or at alternative locations are required, GPI should be contacted to provide additional testing and/or recommendations.

Our subsurface investigations disclosed loose to medium dense sandy soils at depths between 12 and 40 feet below the existing grades. When saturated, these loose sandy soils have the potential to settle if subject to significant seismic forces. Due to the loose soils described above, we recommend the stormwater infiltration be set back at least 30 feet from building foundations.

Standard of practice is to set back stormwater infiltration at least 10 feet horizontally beyond the edge of proposed foundations and property lines, and at least 10 feet vertically below floor slabs.

It should be noted that the volume of water applied during our testing was relatively low as compared to the planned stormwater system. The Civil Engineer should evaluate the feasibility of subsurface infiltration using the rates provided.

It should be noted that these infiltration rates are for clean, clear water and do not include effects of sediment, fines, dissolved solids or other debris, as these materials will significantly reduce the infiltration rates of the subsurface soils. Prior to infiltration, water should be cleaned of sediment or other deleterious materials to help reduce the potential for clogging and reduced infiltration rates. Maintenance of the stormwater system should be performed on a regular basis as recommended by the system designer or manufacturer. These issues should be considered when selecting the reduction factors in the design of the system.

LIMITATIONS

The report, exploration logs, and other materials resulting from GPI's efforts were prepared exclusively for use by Iron Lofts, LLC and their consultants in designing the proposed development. The report is not suitable for a project other than the currently proposed development.

Soil deposits may vary in type, strength, and many other important properties between points of exploration due to non-uniformity of the geologic formations or to man-made cut and fill operations. While we cannot evaluate the consistency of the properties of materials in areas not explored, the conclusions drawn in this report are based on the assumption that the data obtained in the field and laboratory are reasonably representative of field conditions and are conducive to interpolation and extrapolation.

Furthermore, our recommendations were developed with the assumption that a proper level of field observation and construction review will be provided during grading, excavation, and construction by GPI. If field conditions during construction appear to be different than is indicated in this report, we should be notified immediately so that we may assess the impact of such conditions on our recommendations. If construction phase services are performed by others, they must accept full responsibility for geotechnical aspects of the project, including this report.

Our investigation and evaluations were performed using generally accepted engineering approaches and principles available at this time and the degree of care and skill ordinarily exercised under similar circumstances by reputable Geotechnical Engineers practicing in this area. No other representation, either express or implied, is included or intended in our report.

Respectfully submitted,
Geotechnical Professionals Inc.

Patrick I.F. McGervey, P.E.
Project Engineer



Donald A. Cords, G.E.
Principal



Enclosures: References
Figure 1 - Site Plan
Appendix A - Exploratory Borings
Appendix B - Laboratory Testing

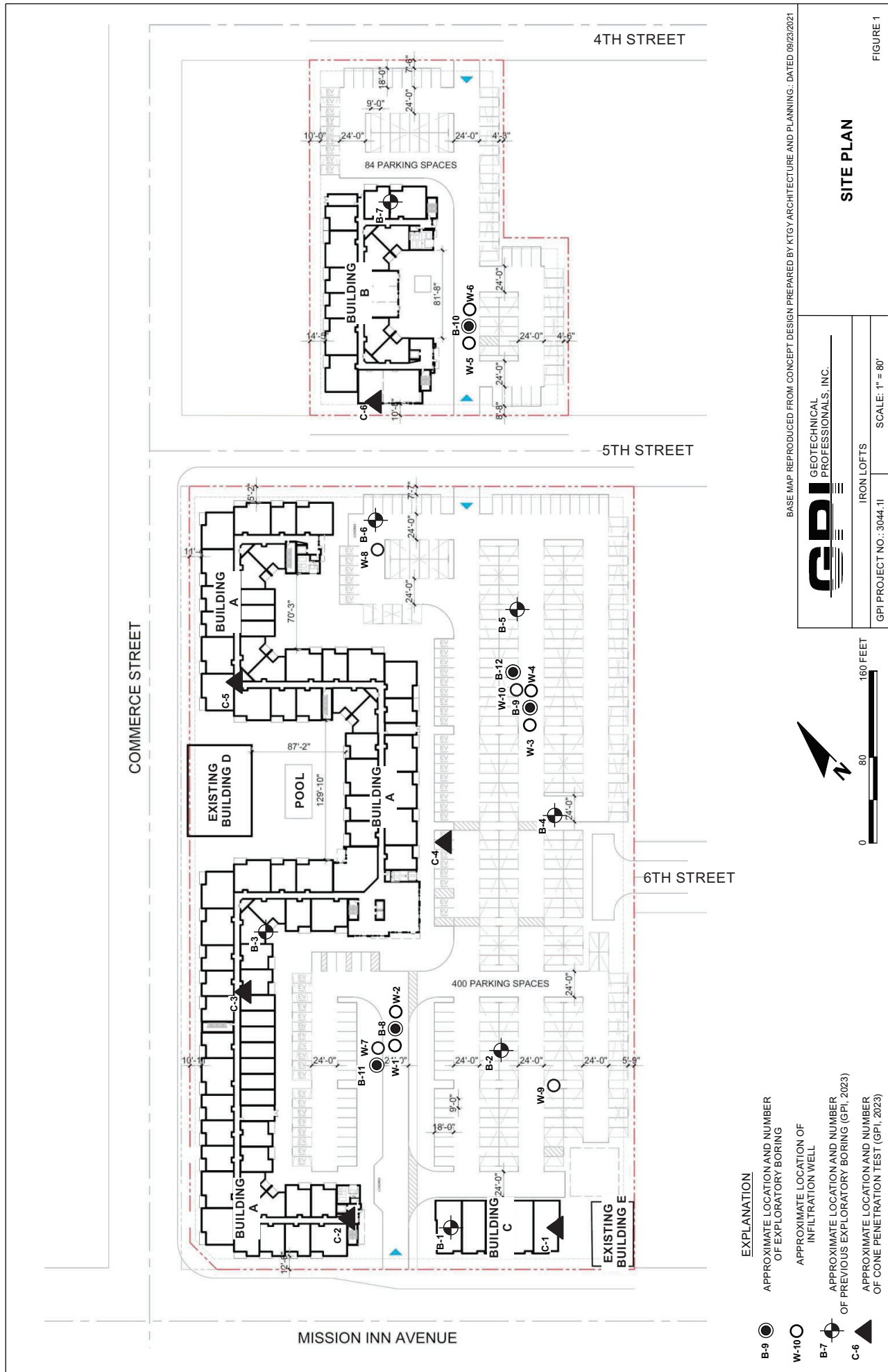
Distribution: Addressee (email)

REFERENCES

California Department of Water Resources, Water Data Library,
<http://www.water.ca.gov/waterdatalibrary/>

Riverside County, Department of Public Works (2011), "Appendix VII – Infiltration Rate Evaluation Protocol and Factor of Safety Recommendations," dated May 19, 2011.

Geotechnical Professionals Inc (GPI, 2014) "Report of Geotechnical Investigation, Proposed Residential Development – Iron Lofts, SEC Mission Inn Avenue and Commerce Street, Riverside California" Project No. 3044.11 Dated February 1, 2023



APPENDIX A

APPENDIX A

EXPLORATORY BORINGS

The subsurface conditions at the site were investigated by drilling and sampling five exploratory borings. The borings were advanced to depths of 23½ to 61 feet below the existing ground surface. The locations of the explorations are shown on the Site Plan, Figure 1.

The exploratory borings were drilled using truck-mounted hollow-stem auger drill equipment. Relatively undisturbed samples were obtained using a brass-ring lined sampler (ASTM D3550). The brass-rings have an inside diameter of 2.42 inches. The ring samples were driven into the soil by a 140-pound hammer dropping 30 inches. The number of blows needed to drive the sampler into the soil was recorded as the penetration resistance.

At selected locations, disturbed samples were obtained using a split-spoon sampler by means of the Standard Penetration Test (SPT, ASTM D 6066). The spoon sampler was driven into the soil by a 140-pound hammer dropping 30 inches, employing the “free-fall” hammer described above. After an initial seating drive of 6 inches, the number of blows needed to drive the sampler into the soil a depth of 12 inches was recorded as the penetration resistance. These values are the raw uncorrected blow counts.

The field explorations for the investigation were performed under the continuous technical supervision of GPI's representative, who visually inspected the site, maintained detailed logs of the borings, classified the soils encountered, and obtained relatively undisturbed samples for examination and laboratory testing. The soils encountered in the borings were classified in the field and through further examination in the laboratory in accordance with the Unified Soils Classification System. Detailed logs of the borings are presented in Figures A-1 to A-5 in this appendix.

Upon completion, the borings and infiltration wells were backfilled using bentonite slurry to the ground surface. The soil cuttings were separated and stockpiled on plastic sheets, and labeled.

The borings were laid out in the field by measuring from existing site features. Ground surface elevations at the exploration locations were estimated from the preliminary grading plan by KHR Associates and should be considered approximate.

MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
					This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
				0		SILTY SAND (SM) brown, dry, with gravel	875
				5			870
14.3		17	S	10		SANDY SILT (ML) brown, moist, very stiff	
11.2		11	S				865
9.7		8	S	15		SILTY SAND (SM) brown, moist, loose	
1.7		14	S			SAND (SP) light brown, dry, medium dense	860
8.0		16	S	20		SILTY SAND (SM) brown, moist, medium dense	
12.4	101	10	D			@ 22.5 feet, loose	855
					Total Depth 23.5 feet		
					Proposed Basin #1		

SAMPLE TYPES

- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED:

4-3-23

EQUIPMENT USED:

8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):

NOT ENCOUNTERED



PROJECT NO.: 3044.11

IRON LOFTS

LOG OF BORING NO. B-8

FIGURE A-1

MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
					This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
				0		SILTY SAND (SM) brown, dry, with gravel	880
				5			875
4.2		18	S	10		SAND WITH SILT (SP-SM) light brown, slightly moist, medium dense	
15.3		26	S			SANDY SILT (ML) brown, very moist, very stiff	870
11.0		17	S	15		@ 15 feet, moist	
11.8		8	S			SILTY SAND (SM) brown, moist, loose	865
12.8		7	S	20		SANDY SILT (ML) brown, moist, firm	
15.7	102	15	D			@ 22.5 feet, very moist, stiff	860
					Total Depth 23.5 feet		
					Proposed Basin #2		

SAMPLE TYPES

- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED:

4-3-23

EQUIPMENT USED:

8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):

NOT ENCOUNTERED



PROJECT NO.: 3044.11

IRON LOFTS

LOG OF BORING NO. B-9

FIGURE A-2

MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
					This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
				0		SILTY SAND (SM) reddish brown, slightly moist	880
				5			875
6.4		27	S	10		SILTY SAND (SM) reddish brown, slightly moist, dense	870
3.2		22	S			@ 12.5 feet, dry	
8.1		50/5"	S	15		SANDY SILT (ML) brown, slightly moist, hard	865
9.4		50/5"	S			SILTY SAND (SM) reddish brown, moist, dense	
10.8		41	S	20			860
6.9	108	50/6"	D			@ 22.5 feet, slightly moist, very dense	
					Total Depth 23.5 feet		
					Proposed Basin #3		

SAMPLE TYPES

- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED:

4-3-23

EQUIPMENT USED:

8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):

NOT ENCOUNTERED


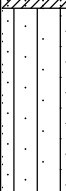


PROJECT NO.: 3044.11

IRON LOFTS

LOG OF BORING NO. B-10

FIGURE A-3

MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
					This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
				0	0 to 30 feet not sampled		875
				5			870
				10			865
				15			860
				20			855
				25			850
24.0		14	S	30		CLAYEY SAND (SC) brown, very moist, stiff, trace clay	845
15.9		14	S	35		SANDY SILT (ML) brown, very moist, stiff	840

SAMPLE TYPES
C Rock Core
S Standard Split Spoon
D Drive Sample
B Bulk Sample
T Tube Sample

DATE DRILLED:
5-31-23

EQUIPMENT USED:
8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):
NOT ENCOUNTERED



PROJECT NO.: 3044.11
IRON LOFTS

LOG OF BORING NO. B-11

	MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
						This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
	10.1	109	48	D	40		SILTY SAND (SM) brown, moist, dense	
	2.6		14	S			SAND WITH SILT (SP-SM) brown, dry, medium dense	835
	17.6						SANDY SILT (ML) brown, very moist, stiff	
	19.3		20	S	45	@ 45 feet, very stiff		
	3.5						SAND WITH SILT (SP-SM) brown, slightly moist, medium dense	
	5.5		23	S			SILTY SAND (SM) brown, slightly moist, medium dense, coarse grained	830
	6.1	120	50	D	50	@ 50 feet, dense		
	11.3		25	S		@ 52.5 feet, moist, medium dense		825
	21.9		16	S	55		CLAYEY SILT (ML) brown, very moist, very stiff	
	12.6		21	S			SILTY SAND (SM) brown, moist, medium dense	820
	16.0	112	23	D	60		CLAYEY SILT (ML) orange brown, moist, very stiff	
						Total Depth 61 feet		
						Proposed Basin 1		

SAMPLE TYPES

- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED:

5-31-23

EQUIPMENT USED:

8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):

NOT ENCOUNTERED



PROJECT NO.: 3044.11

IRON LOFTS

LOG OF BORING NO. B-11

FIGURE A-4

	MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
						This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
					0		0 to 30 feet not sampled	880
					5			875
					10			870
					15			865
					20			860
					25			855
	9.4		14	S	30		SILTY SAND (SM) brown, moist, medium dense	850
	7.0		50/6"	S	35		@ 35 feet, white and orange brown, slightly moist, very dense, coarse grained	845

SAMPLE TYPES

- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED:

5-31-23

EQUIPMENT USED:

8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):

NOT ENCOUNTERED



PROJECT NO.: 3044.11

IRON LOFTS

LOG OF BORING NO. B-12

FIGURE A-5

	MOISTURE (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FOOT)	SAMPLE TYPE	DEPTH (FEET)	DESCRIPTION OF SUBSURFACE MATERIALS		ELEVATION (FEET)
						This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.		
	5.6	116	58	D	40		SILTY SAND (SM) orange brown, slightly moist, dense	840
	10.2		48	S				
	14.3		38	S	45	@ 45 feet, very moist		835
	32.9						CLAYEY SILT (ML) yellow brown, wet, hard	
	18.5		42	S			SANDY SILT (ML) orange brown, wet, hard	830
	17.5	107	72/11"	D	50	@ 50 feet, very moist		
	6.7		58	S			SILTY SAND (SM) brown, slightly moist, very dense	825
	6.1		50/6"	S	55		SILT (ML) yellow brown, wet, hard	
	23.0		46	S			CLAYEY SILT (ML) brown, very moist, hard	825
	19.2	96	50/6"	D	60		SILTY SAND (SM) orange brown, moist, very dense	
	8.6	105					Total Depth 61 feet	
							Proposed Basin 2	

SAMPLE TYPES

- C Rock Core
- S Standard Split Spoon
- D Drive Sample
- B Bulk Sample
- T Tube Sample

DATE DRILLED:

5-31-23

EQUIPMENT USED:

8" HOLLOW STEM AUGER

GROUNDWATER LEVEL (ft):

NOT ENCOUNTERED



PROJECT NO.: 3044.11

IRON LOFTS

LOG OF BORING NO. B-12

FIGURE A-5

APPENDIX B

APPENDIX B

LABORATORY TESTS

INTRODUCTION

Representative undisturbed soil samples and bulk samples were carefully packaged in the field and sealed to prevent moisture loss. The samples were then transported to our Cypress office for examination and testing assignments. Laboratory tests were performed on selected representative samples as an aid in classifying the soils and to evaluate the physical properties of the soils affecting foundation design and construction procedures. Detailed descriptions of the laboratory tests are presented below under the appropriate test headings. Test results are presented in the figures that follow.

MOISTURE CONTENT AND DRY DENSITY

Moisture content and dry density were determined from the soil samples. The samples were first trimmed to obtain volume and wet weight and then dried in accordance with ASTM D2216. After drying, the weight of each sample was measured, and moisture content and dry density were calculated. Moisture content and dry density values are presented on the boring logs in Appendix A.

GRAIN SIZE DISTRIBUTION

Selected soil samples were dried, weighed, soaked in water until individual soil particles were separated, and then washed on the No. 200 sieve. That portion of the material retained on the No. 200 sieve was oven-dried and weighed to determine the percentage of the material passing the No. 200 sieve. The percentages passing the No. 200 sieve are tabulated below.

BORING NO.	DEPTH (ft)	SOIL DESCRIPTION	PERCENT PASSING No. 200 SIEVE
B-8	15	Silty Sand (SM)	41
B-9	15	Sandy Silt (ML)	52
B-10	17.5	Silty Sand (SM)	34
B-10	20	Silty Sand (SM)	34
B-11	35	Sandy Silt (ML)	60
B-11	43	Sandy Silt (ML)	67
B-11	58	Silty Sand (SM)	46
B-12	40	Silty Sand (SM)	18
B-12	50	Sandy Silt (ML)	51

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

A Phase 1 Environmental Site Assessment was performed for the subject property. A portion of the 2,488 page document is located within this Appendix.

" RJ CUG"KGP XKTQP O GP VCN"UKVG"C UUGUUO GP V"

" " " " "



4; ; 4."422: "7^y"Utggv."4; ; 5"8^y"Utggv."57; 8"Eqo o gteg."("4; ; 5"O kulkqp"Kpp"
Cxgpwg" "
Tlxgtukf g."Ecrkhqtpk"; 4729"

Rtgr ctgf "Hqt-<"

Kqp"Nqhm"NNE"
3423"F qxg"Utggv."Uwkg"742"
P gy r qtv"Dgcej ."Ecrkhqtpk"; 4882"

Ugr vgo dgt"43."4243"

J km cpp"RtqlgevP wo dgt"E5/: 877"

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Ugr vgo dgt "43."4243"

O t0Vqf f "Ecf y gm"

Kqp "Nqhu" NNE "

3423 "F qxg" Utggv. "Uwkg" 742"

P gy r qtv "Dgcej ." Ecrkhtpkc"; 4882"

RE:" Phase I Environmental Site Assessment

4; ; 4."522: "7j "Utggv."4; ; 5"8j "Utggv."57; 8"Ego o gteg."("4; ; 5"O kukqp "Kp" Cxgpwg"

Tkxgtukf g."Ecrkhtpkc"; 4729"

J km cpp "Rtqlgev" P q<E5/: 877"

F gct "O t0Ecf y gm<"

J km cpp "Eqpuwnkpi "NNE "ku"r ngcugf "vq"r tqxkf g"vj g"tguvnu"qh"qwt "Rj cug"KGpxkqpo gpvcn"Ukg" Cuuguu gpv" qh" vj g" cdqyg" tghgt gpegf " r tqr gtv{ 0' Vj ku" cuuguu gpv" y cu" r gthqto gf " kp" i gpgtcn' ceeqtf cpeg"y kj "vj g" ueqr g" cpf " rko kcukpu"qh" CUVO "Rtceveg" G3749/35." y j lej "ku"vj g" rvguv' xgtukqp"qh"vj g" G3749"ucpf ctf "r wdrkuj gf "d{ "vj g" CUVO 0"

Y g"cr r tgekv g"vj g"qr r qtwpkv{ "vq"r tqxkf g"gpixkqpo gpvcn'f wg" f kki gpeg"ugt xlegu 0"Kk" {qw} cxg"cp{ " s wguvku"eqpegtpkpi "vj ku"tgr qtv."qt"kh'y g"ecp"cuukv" {qw}kp"cp{ "qvj gt"o cwtg."r ngcug"eqpvcev'qwt" qhleg"cv"936/856/; 7220"

Ukpegt gn{ . ""

J km cpp "Eqpuwnkpi ." NNE " " "




Ugr j gp "Detvrgw" " " " " " "

F cxkf "Twj gthqtf "

Ugpkqt "Rtqlgev" O cpci gt "" " " " " " "

S wrkv{ "O cpci go gpv" F ktgevqt "

"

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Crr gpf kz 'C' " " Ukg'F kci tco IXlelplkv' "O cr "

Crr gpf kz 'D' " " Ukg'Rj qvqi tcr j u"

Crr gpf kz 'E' " " S vgwukppcktg'u'I'Wigt'Rtqxkf gf 'kvhqtto cvkqp'"

Crr gpf kz 'F' " " J kvqtkecn'Tgeqtf u'F qewo gpvcvkqp"

Crr gpf kz 'G' " " Tgi w'vqt { 'Tgeqtf u'F qewo gpvcvkqp"

Crr gpf kz 'H' " " Qvj gt 'F qewo gpv'IT'Ncd'T guw'u"

Crr gpf kz 'I' " " Rtqlgev'Rgtuqppgn'S wcr'hecvkqpu"

"

List of Abbreviations/Acronyms

J km cpp"o c{ "wug"yj g'hqmny kpi "cddtgxkcvkpu"cpf "cetqp{ o u'hqt"eqo o qp"vgtto kppqni { "f guetldgf "kp" qwt "tgr qt v0P qv"cm'cddtgxkcvkpu"qt "cetqp{ o u"b c{ "dg"cr r rlecndg"vq"yj ku'tgr qt v<"

CEO ""	"	ó'Cudguqu'Eapwcklpi 'O cvgtkcn'
CQE""	"	ó'Ctgc'qh'Eapegtp"
CUV""	"	ó'Cdqxgi tqwfp 'Uqtci g'Vcpni'
CUVO ""	"	ó'Co gtlecp 'Uqelgv' 'hqt'Vgukpi 'O cvgtkcn'
DGT""	"	ó'Dwukpguu'Gpxkqpo gpvni'Tkuni'
EGC""	"	ó'Ercuukhlecwqp'Gzeqr vkp'CTgc"
EGTENC""	"	ó'Ego r tgi gpukxg'Gpxkqpo gpvni'Tgur qpug'Ego r gpucwqp'cpf 'Nledkks' 'Cev'
EGTENK""	"	ó'Ego r tgi gpukxg'Gpxkqpo gpvni'Tgur qpug'Ego r gpucwqp'cpf 'Nledkks' 'kphqto cvkq'U{ ugo "
EGUS I ""	"	ó'Eapf kskpcml' 'Gzgo r vUo cniS wcpwv' 'I gpgtcvt"
EQE""	"	ó'Ej go lecn'qh'Eapegtp"
EQTTCVU'	"	ó'Eqtgexk'Gevkq'Ukqu'
ETGE""	"	ó'Eapwqngf 'Tgeqi pl gf 'Gpxkqpo gpvni'Eapf kskp"
F PRN"	"	ó'F grkngf 'P cvkpcn'Rtkqtk' 'Nku'
F VUE""	"	ó'F gr ctvo gpv'qh'Vqzle'Uwducpegu'Eapwqni'
GPI ""	"	ó'Gpi lpggtkpi "
GTP U'	"	ó'Go gti gpe{ 'T gur qpug'P qv'klecwqp'U{ ugo "
HF GR"	"	ó'Hqtkf c'F gr ctvo gpv'qh'Gpxkqpo gpvni'Rtqgecvkq"
HF P [""	"	ó'Htg'F gr ctvo gpv'Ek' 'qh'P gy 'I qtni'
HF QV"	"	ó'Hqtkf c'F gr ctvo gpv'qh'Vtcur qtcwvq"
HQKHQK IHQKN'	"	ó'Hggf qo 'qh'kphqto cvkq' 'IHggf qo 'qh'kphqto cvkq' 'Cev' 'IHggf qo 'qh'kphqto cvkq' 'Ngwt'
J XCE""	"	ó'J gcwpi 'Xgpvkvkq' ('Ck' 'Eapf kskp'kpi "
J TGE""	"	ó'J kuqtke' 'Tgeqi pl gf 'Gpxkqpo gpvni'Eapf kskp"
KCS ""	"	ó'kpf qqt' 'Ck' 'S wcrk' "
KUTC"	"	ó'kpf wutkcn'Ukg' 'Tgeqxgt { 'Cev'
NDR""	"	ó'Ndcf /Dcugf 'Rclpv'
NSI ""	"	ó'Ncti g'S wcpwv' 'I gpgtcvt"
NVCPM'	"	ó'Ncnkpi 'Uqtci g'Vcpni'
NWU"	"	ó'Ncnkpi 'Wpf gti tqwfp 'Uqtci g'Vcpni'
O cuuF GR""	"	ó'O cucej wgwu'F gr ctvo gpv'qh'Gpxkqpo gpvni'Rtqgecvkq"
UF UIO UF U'	"	ó'Uchgv' 'F cwc'Uj ggv' 'TO cvgtkcn'Uchgv' 'F cwc'Uj ggv'
P C ""	"	ó'P qv'Cr r rlecndg"
PEFQJ ""	"	ó'P cuuw'Eapwv' 'F gr ctvo gpv'qh'J gcnj "
PHC"	"	ó'P q' 'Hwvj gt' 'Cevkq"
PHICR"	"	ó'P q' 'Hwvj gt' 'Tgo gf kcn' 'Cevkq' 'Rcp'p'g' "
P IF GR"	"	ó'P gy 'Igtug' 'F gr ctvo gpv'qh'Gpxkqpo gpvni'Rtqgecvkq"
PRF GU"	"	ó'P cvkpcn'Rqmwpv' 'F kiej cti g' 'Gilo lpcvq' 'U{ ugo "
PRN"	"	ó'P cvkpcn'Rtkqtk' 'Nku'
P [EF GR""	"	ó'P gy 'I qtni'Ek' 'F gr ctvo gpv'qh'Gpxkqpo gpvni'Rtqgecvkq"
P [EF QD""	"	ó'P gy 'I qtni'Ek' 'F gr ctvo gpv'qh'Dwkr kpi u'
P [EQGT""	"	ó'P gy 'I qtni'Ek' 'Qh'k'g'qh'Gpxkqpo gpvni'Tgo gf kcvkq"
P [UFGE""	"	ó'P gy 'I qtni'Ucv' 'F gr ctvo gpv'qh'Gpxkqpo gpvni'Eapwtxcvkq"
QRTC"	"	ó'Qr gp' 'Rwdrl' 'Tgeqtf u' 'Cev'
RCF GR"	"	ó'Rgppu' { ncpk' 'F gr ctvo gpv'qh'Gpxkqpo gpvni'Rtqgecvkq"
RCJ ""	"	ó'Rqn' { e' erle' 'Ctqo cvk' 'J { f tqectdqp"
REG"	"	ó'Rgtej nqtqgy { rpg"
TCQ"	"	ó'Tgur qpug' 'Cevkq' 'Qweqo g"
TETC"	"	ó'Tguwteg' 'Eapwtxcvkq' 'cpf 'Tgeqxgt { 'Cev'
TETK"	"	ó'Tguwteg' 'Eapwtxcvkq' 'cpf 'Tgeqxgt { 'kphqto cvkq' 'U{ ugo "
TGE""	"	ó'Tgeqi pl gf 'Gpxkqpo gpvni'Eapf kskp"
TY S ED"	"	ó'Tgi kpcn'Y cvgt' 'S wcrk' { 'Eapwqni' 'Dqctf "
UECS OF""	"	ó'Uqwj 'Eacw' 'Ck' 'S wcrk' { 'O cpci go gpv'F kwtlev'
UEF J U'	"	ó'Uwhqmi' 'Eapwv' 'F gr ctvo gpv'qh'J gcnj 'Ugtxlegu"
UFI ""	"	ó'Uki pl'k'ecp' 'F cwc' 'I cr "
UGO U'	"	ó'Uwr gthwfp' 'Gp'gtr tkug' 'O cpci go gpv'U{ ugo "
UTR"	"	ó'Ukg' 'Tgo gf kcvkq' 'Rtqi tco ""
USI ""	"	ó'Uo cniS wcpwv' 'I gpgtcvt"
UXQE"	"	ó'Ugo k'Xqrvk' 'Qti cple' 'Ego r qwfp "
VEG"	"	ó'Vtkej nqtqgy { rpg"
VUF H'	"	ó'Vtgcw gpv'Uqtci g' 'cpf lqt' 'F kur qucn' 'H'ekks' "
WUGRC"	"	ó'Wpkgf 'Ucv'gu' 'Gpxkqpo gpvni'Rtqgecvkq' 'Ci gpe{ "
WUV""	"	ó'Wpf gti tqwfp 'Uqtci g'Vcpni'
XGE""	"	ó'Xcr qt' 'Cpetqcej o gpv' 'Eapf kskp"
XQE"	"	ó'Xqrvk' 'Qti cple' 'Ego r qwfp "

1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

J km cpp'Eqpuwnkpi . 'NNE '*J km cpp+r' gthqto gf 'c'Rj cug'KGpxktqpo gpvcn'Ukg'Cuuguuo gpv'GUC+' qh'4; ; 4.'522: '7j 'Utggv'4; ; 5'8j 'Utggv'57; 8'Ego o gteg.'('4; ; 5'O kuukqp 'Kpp'Cxgpwg.'Tlxgtukf g." Ecrkhtqplc"*j g"Rtqr gtvf +0'Vj g"cuuguuo gpv'j cu'dggp"eqpf wevgf "kp"ceeqtf cpeg'y kj "qwt"eqpvcvgf " ueqr g" qh' y qtn' cpf " y j" CUVO " Ucpf ctf " Rtcvleg" G3749/35" hqt" Rj cug" K'Gpxktqpo gpvcn' Ukg" Cuuguuo gpv'cpf " Cm' Cr r tqr tkvg" Kps wtkgu" *CCK' Hkpcn'Twg" 62" EHT " Rctv" 5340' Vj ku"ugevkkp" eqpvkpu'c'uwo o ct { "qh'hkpf kpi u."qr kpkapu'cpf "eqpenwukqpu'o cf g'd { 'y ku'cuuguuo gpv'0J qy gxgt. "y ku" ugevkkp."cmqpg."f qgu'pqv'eqpukwvg'y g'eqo r ngvg'cuuguuo gpv'0'Vj g'tgr qt v'o wuv'dg'tgcf 'kp'ku'gpvkt gv { 0

1.1 Summary of Project Details

Primary Street Address:	4; ; 4.'522: '7j 'Utggv'4; ; 5'8j 'Utggv'57; 8'Ego o gteg.'('4; ; 5' O kuukqp 'Kpp'Cxgpwg"				
City:	Tlxgtukf g"	County:	Tlxgtukf g"	State:	Ecrkhtqplc"
Tax ID/Parcel Number:	433/244/248.'433/244/249.'433/293/223.'433/293/224.'433/293/226." 433/293/227.'433/293/245.'433/293/246.'433/294/224.'433/294/226." 433/294/242.'433/294/243"				
Property Owner:	Tlxgtukf g'Ueter 'Kqp'cpf 'O gvcn'Eqtr 0'				
Zoning Designation:	O 4'6'Kpf wutkcn'Ego o gtekn'Tgukf gpvcn'				
Approx. Property Area:	80 ; 'cetgu"				
Buildings/# of Floors	Vy q'T'vy q/uxqt { 'y ctgj qwug.'dwtpv'f'qy p'qhtleg'"				
Approx. Building Area:	6.722"18.222"13: .372"				
Approx. Year Built:	3; ; 7'6'3; 82"				
Commercial Occupants:	Pqpg"/'xcecpv'				
Current Use:	Xcecpv'				
Prior Uses:	Ueter 'O gvcn'Tge { erkpi "				
Inspected By:	O u0Uj kr c'Uwplk"				
Site Contact/Company:	O t0Vqf f 'Ecf y gm'				
Site Escort/Company:	O t0Vqp { "Vj qo cu'TQy pgt'tgr tgugpvc'kxg'"				
Inspection Date:	Ugr vgo dgt "42.'4243"				
Weather Conditions:	Uwpp { .': 2'f gi tggu'H'				

1.2 Findings Summary Table

Assessment Subject	No REC	REC	CREC	HREC	Rpt. Ref.
Property Regulatory Records Review:	"	Z"	"	Z"	66"
Property Historical Records Review:	"	Z"	"	"	60"
Bulk Petroleum Storage:	"	"	"	Z"	76"
On-Site Operations:	"	Z"	"	"	76"
On-Site Haz-Mat Storage/Use/Spills:	"	Z"	"	"	76"
Transformers/Hydraulic Systems:	Z"	"	"	"	76"
Waste Discharges:	Z"	"	"	"	76"
Interviews:	Z"	"	"	"	80"
Adjoining & Nearby Properties:	Z"	"	"	"	66" 70"
Prior Env. Reports/User Provided Info:	"	Z"	"	"	50"
Data Gaps:	Z"	"	"	"	46"

1.3 Findings, Opinions and Conclusions

1.3.1 Recognized Environmental Conditions

J kmo cpp"j cu'r gthqto gf "c"Rj cug"KGpxktqpo gpvcn"Ukg"Cuuguuo gpv"kp"ceeqtf cpeg"y kj "vj g"ueqr g" cpf "hko kcvkqpu"qh"CUVO "Rtceveg"G3749/35"qh"vj g"Rtqr gtvf "cu'f guetkdgf "kp"Ugevkqp"4"qh"vj ku'tgr qt'0" Cp{ "cf f kkkqpu"vq. "gzegr vkqpu"vq. "qt'f grgvkqpu"htqo "vj ku'r tceveg"ctg"cnq"f guetkdgf "kp"Ugevkqp"4"qh" vj ku'tgr qt'0"Vj ku'cuuguuo gpv"j cu'tgxgcrgf "pq"gxkf gpeg"qh"recognized environmental conditions"kp" eqppgevkqp"y kj "vj g"Rtqr gtvf. "gzegr v'htq"vj g"hqmqy kpi <

RECOGNIZED ENVIRONMENTAL CONDITIONS	
TGE %6"	Tkxgtulfg"Ueter"Kqp"cpf"O gvcn"4; ; 5"8vj "Utggv"y cu'rkugf "kp"pwo gtqwu"tgi wrcvt{ "f cvcdcugu"ht"ukg" eqpwo kpcvkqp"tgumkpi "ht"vj g"j kvqtke"vug"cu'c"ueter "o gvcn" {ctf'0"Vj ku'ukg"ku'ewttgpvq "uwlgev"vq" c" xqnpvct{ "erpcwr "ci tggo gpv'y kj "vj g" F VUE"vq"eqpf wev'htvj gt"kp'xguki cvkqpu"cpf"tgo gf kcvkqp'0"Vj g" eqpwo kpcvu" qh" eqpegt" y gtg" kpf kecvgf " vq" kpenf g" ctugple." rcf." REDu." r qn/ pwevgt" ctqo cvk" j {f tqectdqup."vgtcej nrtgy {rpg"cpf"vq'cnr' gvtqrgwo "j {f tqectdqup'0
TGE %4"	Vj g'hpqy p'eqpwo kpcvkqp"ghv"kp'r rceg'chgt"vj tgg"5+WUV"enquwgu'cv'4; ; 5"8vj "Utggv."ku'eqpukf gtgf "vq"dg" c" TGE"kp"eqppgevkqp"y kj "vj g"Rtqr gtvf'0
TGE %6"	J kmo cpp"qdugtxgf "ugxgtcn'tckn"cpf"y qqf "vku'y kj "vj g"htqo gt"tcktkcf "tki j vqh'y c{ "uwr r qtvkpi "vj g" r quukdkk{ "vj cv'tcktkcf "vku'o c{ "dg"r tgugpv'lwu'dgrqy "vj g"uwtceg"uqk0"tcktkcf "vku'ctg"mpqy p"vq"dg" vgcvgf "y kj "qk/dcuvgf"cpf "ct/dcuvgf "ej go lecu'uwej "cu'etgquvg."cpf "tcktkcf "ur wtu'ctg"eqo o qpn' "vgcvgf" y kj "r guvekf gu'ht"y ggf "eqpvtqf'0"Vj g'dwtlfg "tcktkcf "hpg'ur wt"ku'eqpukf gtgf "vq"dg" c" TGE"kp"eqppgevkqp" y kj "vj g"Rtqr gtvf'0
HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS	
J TGE %6"	Xctkqwu"WUV"enquwgu'cv'vj g"Rtqr gtvf "j cxg'rhv'eqpwo kpcvkqp"kp'r rceg"kp'cnf kpi "c"32.222/i cnq" f kgugl' WUV'cv'5255"7" "Utggv."cpn' uku'qh'uqku'dgpgcvj "vj g"cpmlkpf kecvgf "84"o i lni "VRJ f "mgr v'kp'r rceg."y j kej "

	ku'dgrny "tgukf gpvkn'ergcpwr "rgxgm."cpf "ku"vj gtghqtg"eqpukf gtgf "vq"dg"c"J TGE "kp"eqppgevkp"y kj "vj g" Rtqr gtvf "0Vj g'emquwtg"qh'c"tgr qtvgf "3.222/i cmpp "WUV"cv'vj g"uqwj gcu'eqtpgt"qh'vj g'y ctgj qvug"cv'57; 8" Eqo o gteg'Utggv'y kj "c'hpqy p'tgrgug."tgr qtvgf 'ergcpwr 'y kj 'tgi wvvt { 'emquwtg'ku'cnuq'eqpukf gtgf "vq"dg" c"J TGE "kp"eqppgevkp"y kj "vj g'Rtqr gtvf '0'
CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS	
"	P q'ETGEu'y gtg'kf gpvkn'ergcpwr
SIGNIFICANT DATA GAPS	
"	P q'UFI u'y gtg'kf gpvkn'ergcpwr

1.3.2 REC Response Action Recommendations

Vj g"hmny kj "vdrn"r tguvpu"tgeqo o gpf gf "tgr qpug"cevku"vq"vj g"kf gpvkn'ergcpwr "TGEu"lqt "hvt yj gt" kpxgwk cvkq"cpf lqt"eqttgevkxg"cevku"vq"vq"

REC RESPONSE ACTION SUMMARY TABLE	
REC	Response Action
TGE "%8." 4.5"	Eqo r rnyvj "j g'ergcpwr "cu'rkf "qwl'kp"vj g"tgo gf kn'Cevkq"Rrpx'r tgr ctgf "d { 'I UKhtq"vj g'FVUE"cpf "ugm" qwl'emquwtg"lqo "cr r tqr tkvg'tgi wvvt { 'ci gpeku0'
J TGE "%8"	P q'tgr qpug"cevku"tgeqo o gpf gf "cv'vj ku'vko g0'


1.3.3 Notable Environmental Conditions / De Minimis Conditions

Vj g"hmny kj "gpxkqpo gpvkn'eqpf kkvpu"y gtg'kf gpvkn'ergcpwr ."dw"ctg"pqv'eqpukf gtgf "vq"dg"c"J TGE "kp" eqppgevkp"y kj "vj g'Rtqr gtvf <

NOTABLE ENVIRONMENTAL CONDITIONS / DE MINIMIS CONDITIONS	
30'	Vj g"o clp"dwukgu"cv'vj g'Rtqr gtvf "uwlgev"vq"vj ku"lpxgwk cvkq"ku"tkxgtuf g"Ueter "Kq"cpf "O gvn'Eqtr qtevkp" eqxgtkpi "cm'vj g'r ctegn'qh'kpvgt gu00 wnr ng'cf f tguugu'ct g'kugf "eqpewt gpw" qp'vj g"WUDtqy phgrf u'cpf "HKF F U" f cvdcugu0Cf f kkvpcmf ."o wnr ng"qr gtevkpu"cv'vj g'Rtqr gtvf "j cxg"dgpp"hc i gf "qp"pwo gtqwu"gpvkn' f cvdcugu0Nkvp u'lpf kcv"vj cv'hqto gt"wpf gti tqwpf "uqtc i g"vpm"j cxg"rgh'eqpwo kcpw"kp"r rreg."oQr gp"o" Cuuguo gpv("Kvgtko "Tgo gf kn'Cevkq.0"cpf "o cp { 'r qvgn'eqpwo kcpw'qh'eqpegt0'
40'	O cp { "qh'vj g'cf lqkpi "r tqr gtvgu."y kj "vj g'zegr vkp"qh'uqo g"qh'vj g'gcuvtg'cf lqkpi "tgukf gpegu."ctg'kf gpvkn'ergcpwr "c'tcpi g'qh'gpxkqpo gpvkn'f cvdcugu0Cf lqkpi "r tqr gtvgu"vq"vj g'pqt y gcu."pqt y /pqt y y guv."pqt y /pqt y gcu." cpf "pqt y "ctg'kf gpvkn'ergcpwr "vj g"WUDtqy phgrf u'f cvdcugu0'

1.3.4 Environmental Professional Statement

Kf gemtg"vj cv."vq"vj g"dguv"qh"o { "r tqhguukpcn"npqy ngf i g"cpf "dgrgh"K'o ggv"vj g" f ghkpvkq"qh' Environmental Professional cu'f ghkpvkq "kp'E5340B2'qh'62'EHI'5340Kj cxg'vj g'ur gekk's wvkn'cevku" dcugf "qp"gf wecvkq."vckkpi "cpf "gzi gtlpge"vq"cuuguu"c"property qh'vj g'pcwtg."j kvqt { "cpf "ugwkpi " qh'vj g'uwlgev"property0Kj cxg'f gxgnr gf "cpf "r gthqto gf "cm'cr r tqr tkvg"lps wtkgu"kp"eqphqto cpeg" y kj "vj g'ucpf ctf u'cpf "r tcevegu'ugv'htq y "kp'62'EHI "Rctv'5340"


 aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
 F cxk "Twj gthqtf"
 Gpxkqpo gpvkn'Rtqhguukpcn"

1.4 Business Environmental Risks / Non-ASTM Scope

J km cpp'j cu'r gthqto gf "c'ho kqf 'tgxkgy "qh'yj g'hqmy kpi 'r qvprkcn'Dwukpguu'Gpxkqpo gpvcrT'kumi" *DGT+ "cnuq'npqy p'cu'õP qp/CUVO "Ueqr g'eqpegtpuö. "kp"ceeqtfcpeg'y kj "yj g'eqpvtcevgf "ueqr g"qh' y qtn'ueqr g'hqt'yj ku'cuuguuo gpv0'Vj g'hqmy kpi "ku'c'owo o ct { "qh'hkpf kpi u'hqt "cr r necdrg'DGT u0'Hqt " c'o qtg'f gvckrgf 'f kweuukqp'qh'yj g'hkpf kpi u'cpf "eqpvtcevgf "ueqr g"qh'y qtm'r rncug'ugg'yj g'tghgtgpegf " tgr qt'v'ugev'kqp0"

BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE			
Subject	Findings	Not Appl.	Rpt. Ref.
Asbestos	Dcugf "qp'yj g'dwkrf kpi 'ci g.'cudguqu'õ c { "dg'r tgu'p'0'k'vgtkqtu'qh'yj g'utwewtgu'y gtg" pqv'cxckrdrg'hqt 'kpur gev'kqp'cv'yj ku'wo g0"	"	908"
Lead Paint	"	Z"	904"
Radon	Rtqr gtv' "ku'rqecvgf "kp'yj g'WUGRC "tcf qp'f guki pcv'kqp "\ qpg'4'qt "õ qf gtcvg'tkun'ctgc" hqt' tcf qp0"	"	905"
Mold / Microbial Damage	J km cpp" f kf "pqv'qdu'gtxg" cp { "gxkf gpeg" qh' uki p'k'ecp'v' r tqdrgo u'y kj "o qk'w'wtg" k'p'v'w'kqp "qt" o qrf lo letqdken' i tqy yj "cv' yj g" Rtqr gtv' 0' J qy g'xgt. "k'p'vgtkqtu" qh' yj g' utwewtgu'y gtg'pqv'cxckrdrg'hqt 'kpur gev'kqp'cv'yj ku'wo g0"	"	906"
NWI Wetlands	P q'õ cr r gf 'y gv'cpf "ctgcu'y gtg'f gr levgf "cv'yj g' Rtqr gtv' 0"	"	907"
Lead in Drinking Water	Rqvcdrq'y cvgt "ugtxleg" cv'yj g' Rtqr gtv' "ku'r tqxkf gf "d { "yj g'ekv' "qh'Tkxgtukf g'Rwdrke" Wkksk'gu0'	"	908"

2.0 INTRODUCTION

2.1 Purpose and Scope

Vj ku'cuuguuo gpv'y cu'eqpf wevgf "wknk kpi "i gpgtcmf "ceegr vgf "Rj cug"KGUC"lpf wuxt {"ucpf ctf u"lp" ceeqtf cpeg'y kj 'y g'CUVO 'Ucpcf ctf 'Rtceveg'G3749/350Vj g'CUVO 'f guetkdguy'gug'b gy qf qnqi kgu' cu'tgr tgugpvkpi "i qqf "eqo o gtekn'cpf "ewuqo ct {"r tceveg"lp"vj g"Wpkvgf "Ucvgu"qh'Co gteec"htq" eqpf wekpi "cp"gpv'kqpo gpv'n'ukg'cuuguuo gpv'qh'c'r ctegn'qh'eqo o gtekn'tgcn'gucv'g'y kj "tgr gev'vq" vj g"tcpi g"qh'eqpvo kpcpvu"y kj lp"vj g"ueqr g"qh'vj g"Eqo r tgi gpukxg" Gpv'kqpo gpv'n' Tgur qpug." Eqo r gpucv'kq"cpf "Nkcdkxk {"Cev'*EGTENC+"cpf "r gvtqrgwo "r tqf weu'Cu'uwej ."vj ku'r tceveg"ku' kpv'gpf gf "vq'r gto k'c'wugt'vq'ucv'kxh {"qpg'qh'vj g'tgs wkt go gpw'vq's wcrkh {"htq"vj g'kppqegpv'rcpf qy pgt." eqpvi wqwu'r tqr gtv {"qy pgt"qt"dqpc"lkf g'r tqur gev'xg'r vtej cugt"rko kcv'kqpu"qp"EGTENC"nkcdkxk {" *j g'gkpc'htgt."vj g'o'rcpf qy pgt'nkcdkxk {"r tqv'ev'kqpu.o'qt"o'NNRuö+<vj cv'ku."vj g'r tceveg"vj cv'eqpukxwgu' cm'cr r tqr tkcv'g'kps wkt'ku'lpv'vj g'r tglx'kwu'qy pgtuj kr "cpf "wugu'vj g'r tqr gtv {"eqpukxwgu'vj kj "i qqf " eqo o gtekn'cpf "ewuqo ct {"r tceveg'cu'f ghkpgf "cv'64"WUUEOE; 823*57+*D+0Vj g'r tko ct {"i qcn'qh'vj g' r tqeguugu'gucdrkj gf "d {"CUVO "G3749/35"ku'vq"kf gpv'kx {"recognized environmental conditions"lp" eqppgev'kq"y kj "y g'Rtqr gtv'0"

Vj g'vgo "recognized environmental condition (REC)"ku'f ghkpgf "d {"vj g'CUVO "cu'vj g'r tgugpeg"qt" rkn'g {"r tgugpeg'qh'cp {"j c| ctf qwu'uwducpegu"qt"r gvtqrgwo "r tqf weu'lp."qp"qt"cv'c'r tqr gtv {"<*3+f wg" vq"t'grgcug"vq"vj g'gpv'kqpo gpv'4+wpf gt"eqpf kkv'kqpu'lpf kcv'xg'qh'c'tgrgcug"vq"vj g'gpv'kqpo gpv'2"t" *5+wpf gt"eqpf kkv'kqpu'vj cv'r qug'c'o cvgtkn'vj tgcv'qh'c'hwat'g'tgrgcug"vq"vj g'gpv'kqpo gpv'0"

Vj g' CUVO "j cu' cmq" f ghkpgf "vj g' vgo u" historical recognized environmental conditions" cpf " controlled recognized environmental conditions cu"vy q"cf f kkv'kqpcn'v'r gu"qh'TGEu' "Vj g'vgo " historical recognized environmental condition (HREC)"ku'f ghkpgf "cu'c'r cuv'tgrgcug'qh'cp {"j c| ctf qwu' uwducpegu"qt"r gvtqrgwo "r tqf weu'vj cv'j cu'qeewt'gf "lp"eqppgev'kq"y kj "vj g'Rtqr gtv {"cpf "j cu'dggp" cf f tguugf "vq"vj g'ucv'kxh'ev'kq"qh'vj g'cr r r'ecdr'g'tgi wrcv'qt {"cwj qtkv {"qt"o ggv'kpi "wpt'gut'lev'gf "wug" etk'gtk" gucdrkj gf "d {"c"tgi wrcv'qt {"cwj qtkv {"y kj qw'uwdlgev'kpi "vj g'Rtqr gtv {"vq"cp {"tgs wkt'gf " eqpvt'qni"*htq"gzco r ng."r tqr gtv {"wug'tgut'lev'kqpu."cv'xkx {"cpf "wug'rko kcv'kqpu."kpv'kwx'kqpcn'eqpvt'qni" qt"gp'i kpg'gtkpi "eqpvt'qni+0"

Vj g'vgo "controlled recognized environmental condition (CREC)"ku'f ghkpgf "cu"c"tgeqi pl'gf " gpv'kqpo gpv'n' eqpf kkv'kq"tguw'kpi "htqo "c"r cuv'tgrgcug"qh"j c| ctf qwu' uwducpegu"qt"r gvtqrgwo " r tqf weu'vj cv'j cu'dggp"cf f tguugf "vq"vj g'ucv'kxh'ev'kq"qh'vj g'cr r r'ecdr'g'tgi wrcv'qt {"cwj qtkv {"y kj " j c| ctf qwu' uwducpegu" qt" r gvtqrgwo " r tqf weu' cmqy gf " vq" tgo ckp" lp" r r'ecg" uwdlgev' vq" vj g' ko r ngo gpv'kq"qh'tgs wkt'gf "eqpvt'qni'0"

Eqpf kkv'kqpu'f g'vgo kpgf "vq"dg""de minimis conditions""ctg'pqv'eqpukf gt'gf "vq"dg'TGEu."J TGEu"qt" ETGEu'0De minimis condition"ku'f ghkpgf "d {"vj g'CUVO ."oi' cu'c'eqpf kkv'kq"vj cv'i gpgtcmf "f qgu'pqv' r tgugpv'c'vj tgcv'vq"j wo cp"j gcnj "qt"vj g'gpv'kqpo gpv'cpf "vj cv'i gpgtcmf "y qwf "pqv'dg"vj g'uwdlgev'qh' cp"gp'htego gpv'ev'kq"kh'dt'qwi j v'vq"vj g'cwgp'v'kq"qh'cr r tqr tkcv'g'i qxgtpo gpv'n'ci gpek'gu'0"

Vj g'ej kgh'eqo r qppgw'qh'vj ku'cuuguuo gpv'ct'g'i gpgtcmf "f guetkdgf "cu'hqmqy u'"

- C"pqv'kpx'cukxg"xkuwcn'tgeqppcku'cpeg"qh'vj g'Rtqr gtv {"cpf "cf lqk'kpi "r tqr gt'vku"lp"ceeqtf cpeg" y kj "CUVO "i wkf g'kpgu'htq"gxk'f gpeg'qh'TGEu'0"

"

- Kpvtxkgy u'qh'r cu'cpf 'r t'gugpv'qy pgtu'cpf 'qeew cpw'cpf 'ucv'cpf 'h'qecni qxgtpo gpv'qh'hekcnu." uggmkpi 'lphqto cvkqp'tgrcvf "v'j g'r qv'pvcn'r t'gugpeg'qh'TGEu'cv'j g'Rtqr gtv'0"

"

- C" t'gxkgy " qh" u'cpf ctf " r j { u'kcn' t'geqtf " u'qwt'egu" hqt" cxckrdng" vqr qi tcr j ke." i gqmqi ke" cpf " i tqwpy cvgt'f'cvc0'

"

- C't'gxkgy 'qh'u'cpf ctf 'j k'v'q'le't'geqtf 'u'qwt'egu.'u'wej 'cu'h'k'g'l'p'w't'c'peg'o cr u.'ekv' f'k'gevt'k'g'u.'c'g't'k'n' r j qv'qi tcr j u.'r' t'k'q't'g'r' q't'w'c'p'f' 'k'p'v't'x'k'g'y u.'g'v'e'0'v'q'f' g'v'g't'o k'p'g'r' t'k'q't'w'g'u'q'h'v'j g'Rtqr gtv' 'h'q'o 'v'j g' r t'g'v'p'v.'d'c'e'm'v'q'v'j g'Rtqr gtv' 'u' 'h'k'v'f' g'x'g'm'r' g'f' 'v'v'g.'q't' 'd'c'e'm'v'q'3; 62.'y j k'ej g'x'g't' 'k'u'g'c't'r'k'g't'0'

"

- C't'gxkgy "qh'u'cpf ctf "gp'x'k'q'p'o gp'v'c'n't'geqtf "u'qwt'egu'k'p'e'n'f'k'p'i "h'g'f'g't'e'n'c'p'f' "u'c'v'g'g'p'x'k'q'p'o gp'v'c'n' f'c'v'd'c'g'u." c'p'f' " c'f'f'k'k'q'p'c'n' g'p'x'k'q'p'o gp'v'c'n' t'geqtf " u'qwt'egu." v'q' k'f'g'p'v'k'h'f' " r'q'v'g'p'v'c'n' t'g'i w'r'v'q't'f' " e'q'p'eg't'p'u'y k'j 'v'j g'Rtqr gtv' .c'f' l'q'l'p'k'p'i 'r' t'q'r' g't'v'g'u'c'p'f' 'r' t'q'r' g't'v'g'u'q'c'v'g'f' 'y k'j k'p'v'j g'v'w't'q'w'p'f' k'p'i " c't'g'c'0'"

"

Cp'g'x'c'm'c'v'k'p'q'h'g'p'x'k'q'p'o gp'v'c'n'q't'q'v'j g't'g'i w'r'v'q't'f' { 'e'q'o r' n'c'p'eg'o c'w'g't'u'k'u'g'z'e'n'f' g'f' 'h'q'o 'v'j g'v'e'q'r' g' q'h'v'j k'u'c'u'g'u'o g'p'v'0'"

"

Vj g'g'v'o g'v'j q'f' q'm'j k'g'u'c't'g'f' g'u'e't'k'd'g'f' "cu't'g'r' t'g'v'p'v'k'p'i "i q'q'f' "e'q'o o g't'e'k'n'c'p'f' "e'w'u'q'o c't'f' { "r' t'c'e'v'k'g' "h'q't' " e'q'p'f' w'e'v'k'p'i " c'p' " G'p'x'k'q'p'o gp'v'c'n' U'k'g' " C'u'g'u'o g'p'v' q'h' "c" r' t'q'r' g't'v'f' " h'q't' " v'j g' r' w'r' q'u'g' " q'h' k'f' g'p'v'k'h'f' k'p'i " t'g'e'q'i p'k' g'f' "g'p'x'k'q'p'o gp'v'c'n'e'q'p'f' k'k'q'p'u'0'"

"

2.1.1 Business Environmental Risks/Non-ASTM Scope Considerations

"

Kp'c'ee'q't'f' c'p'eg'y k'j "q'w' "e'q'p't'c'e'v'c'i t'g'g'o g'p'v.'J k'm' c'p'p'o c'f' { "j c'x'g'c'f'f' t'g'u'g'f' "v'j g'h'q'm'j k'p'i "r' q'v'g'p'v'c'n' g'p'x'k'q'p'o gp'v'c'n'l'w'd'l'g'e'v'o c'w'g't'u'v'j c'v'c't'g'q'w'w'k'f' g'q'h'v'j g't'g's'w'k't'g'o g'p'w'q'h'v'j g'CUVO 'G3749/35' u'c'p'f' c't'f' <"

"

Cud'g'u'v'u/E'q'p'v'c'k'p'k'p'i "O c'v'g't'k'n'u" *CEO <C" e'w't'u'q't'f' { "p'q'p'/k'p'v'w'k'x'g' "x'k'w'c'n' u'e't'g'g'p'k'p'i "h'q't'v'j g'r' t'g'v'g'p'eg' " q'h' u'w'ur' g'e'v' CEO "y k'j k'p'v'j g'c'e'g'u'g'f' "c't'g'c'u'q'h'd'w'k'f' k'p'i u'd'w'k'n'r' t'k'q't'v'q'3; ; 2"q'p'v'j g'Rtqr gtv' 0'K'k'u' go r j c'uk' g'f' " v'j c'v' v'j k'u' e'w't'u'q't'f' { "p'q'p'/k'p'v'w'k'x'g' "x'k'w'c'n' u'e't'g'g'p'k'p'i " f'q'g'u' p'q'v' e'q'p'u'k'w'w'g' "c'p' " c'u'd'g'u'v'u" u'w'x'g'f' { k'p'ur' g'e'v'k'p'q'h'v'j g'r' t'g'o k'g'u'0'C'p' "c'u'd'g'u'v'u" u'w'x'g'f' { k'p'ur' g'e'v'k'p' "u'j q'w'f' "d'g' "u'q'w' i j v'd' { "v'j g' "t'g'r' q't'v' W'ug't' *u'k'h'o q't'g' "e'g't'v'c'k'p'v'f' "k'u'f' g'u'k't'g'f' "t'g'i c't'f' k'p'i "CEO "c'p'f' "r' q'v'g'p'v'c'n'c'u'd'g'u'v'u" j c'f' c't'f' u'c'v'v'j g'Rtqr gtv' 0' H'w'v'j g't'o q't'g' "c' t'g'x'k'g'y "q'h't'g'i w'r'v'q't'f' { "e'q'o r' n'c'p'eg'o c'w'g't'u'r' g't'v'c'k'p'k'p'i "v'q' "c'u'd'g'u'v'u'k'u'g'z'e'n'f' g'f' 'h'q'o 'v'j g' v'e'q'r' g'q'h'v'j q't'n'0'"

"

N'g'c'f' /D'c'ug'f' "R'c'k'p'v' " *NDR <C" e'w't'u'q't'f' { "p'q'p'/k'p'v'w'k'x'g' "x'k'w'c'n' u'e't'g'g'p'k'p'i "q'h'v'j g' "e'q'p'f' k'k'q'p' "q'h'r' c'k'p'v'g'f' " u'w'h'c'eg'u'k'p'v'j g'c'e'g'u'g'f' "c't'g'c'u'q'h't'g'u'k'f' g'p'v'c'n'd'w'k'f' k'p'i u'l'v'p'k'u'd'w'k'n'r' t'k'q't'v'q'3; ; 2"q'p'v'j g'Rtqr gtv' 0'K'k'u' go r j c'uk' g'f' " v'j c'v'v'j k'u' e'w't'u'q't'f' { "p'q'p'/k'p'v'w'k'x'g' "x'k'w'c'n' u'e't'g'g'p'k'p'i " f'q'g'u' p'q'v' e'q'p'u'k'w'w'g' "c' "e'q'o r' t'g'j g'p'u'k'x'g' " u'w'x'g'f' { "h'q't' "NDR" q't' "r' q'v'g'p'v'c'n' "n'g'c'f' "j c'f' c't'f' u'0'C" "e'q'o r' t'g'j g'p'u'k'x'g' "k'p'ur' g'e'v'k'p' "u'j q'w'f' "d'g' "u'q'w' i j v'd' { "v'j g' "t'g'r' q't'v' W'ug't' *u'k'h'o q't'g' "e'g't'v'c'k'p'v'f' "k'u'f' g'u'k't'g'f' "t'g'i c't'f' k'p'i "NDR" c'v'v'j g'Rtqr gtv' 0'H'w'v'j g't'o q't'g' "c' t'g'x'k'g'y "q'h' t'g'i w'r'v'q't'f' { "e'q'o r' n'c'p'eg'o c'w'g't'u'r' g't'v'c'k'p'k'p'i "v'q' "n'g'c'f' /d'c'ug'f' "r' c'k'p'v'k'u'g'z'e'n'f' g'f' 'h'q'o 'v'j g' v'e'q'r' g'q'h'v'j q't'n'0'"

"

W'U'G'R'C' "F' g'uk'i p'e'v'g'f' "T'c'f' q'p' "R'q'v'g'p'v'c'n' <T'g'x'k'g'y "q'h'i' g'p'g't'e'n'p'q'p'/u'k'g' "u'r' g'e'k'h'e' "f'c'v' "r' w'd'r'k'uj g'f' "d' { "v'j g' W'U'G'R'C' "t'g'i c't'f' k'p'i "v'j g' "T'c'f' q'p' \ q'p'g' "e'r'c'u'k'h'e'c'v'k'p' "h'q't'v'j g't'c'g'c'q'h'v'j g'Rtqr gtv' 0'

"

O'q'r'f' I'O k'e't'q'd'k'n' "F'c'o'c'i' g' <C" e'w't'u'q't'f' { "p'q'p'/k'p'v'w'k'x'g' "x'k'w'c'n' u'e't'g'g'p'k'p'i "y k'j k'p'v'j g'c'e'g'u'g'f' "c't'g'c'u'q'h' d'w'k'f' k'p'i u'q'p'v'j g'Rtqr gtv'f' { "h'q't' "g'x'k'f' g'p'eg' "q'h'u' { u'g'o k'e' "o k'e't'q'd'k'n' "r' t'q'd'r'g'o u. "k'p'e'n'f' k'p'i "x'k'k'd'r'g' "o q'r'f' "

"

i tqy vj .y cvgt'f co ci gf "dwrk fpi "o cvgtkcn"qt"o wuv "qf qtu0K"ku"go r j cuk gf "vj cv"vj ku"ewtuqt { "ppq/ kptwukxg"xkucn"uetggpki "f qgu'pqv'eqpukxwg"e"eqo r tgi gpukxg'wtxg{ 'hqt"o qkwwt glo qrf lo letqdkn' f co ci g0C"o qtg'eqo r tgi gpukxg'kpur gevqp"uj qwf "dg"uqwi j v'd { "vj g'tgr qt vWugt *u"kh'o qtg'egtckpv' " ku'f gukt gf "tgi ctf kpi "vj g'r qvqpvkn'hqt"o qkwwt glo qrf lo letqdkn'f co ci gu"cv"vj g'Rtqr gt v'0"

"

P Y KY gvcpf u<T gxky "qh'WU'Hkuj "cpf "Y kf rkg'Ugtxleg'P cvkqpcn'Y gvcpf "Kxgpvt { 'f ki kkk gf 'f cvc' qh'o cr r gf "y gvcpf u'cu'r t gupvgf "k"vj g'cwcej gf "GF T" Tcf kwu'O cr 'r nuw'I gqej gem'Tgr qt v'0"

"

K'ku"go r j cuk gf "vj cv"tgi ctf nguu"qh"vj g"y gvcpf u'f cvc"qdvkpgf "xlc"vj g'GF T" I gqej gem/Rj { ulecn' Ugwki "Uqwtg"C f f gpf wo . "c" f gkpgcvkqp"qh'tgi wcvgf "y gvcpf u'd { "c" s wcrkkgf "r tqhguukqpcn'y qwf " dg'y cttcpvgf "vq" f gvto kpg"vj g'r t guppeg"qt "cdugpeg"qh'tgi wcvgf "y gvcpf u'cv"vj g'Rtqr gt v'0"

"

Ngcf "k" F tkpnki "Y cvgt<T gxky "qh"vj g'r qvqpvkn'hqt" gnxcvgf "ngxgn"qh'ngcf "k"vj g'f tkpnki "y cvgt" d { "f gvto kpkpi "vj g"uqwtg"qh"vj g'f tkpnki "y cvgt" uwr n { "cpf "c" t gxky "qh"cxckrdng" vguiki "qt" eqo r rkepeg'f cv'tgr qt v'0"

"

2.2 Property Location/Legal Description

"

Rtqr gt v' "mcevkkp"cpf "ngi cnf guetk vkp" f gvcku'ct g' f guetkdgf "cu'hqmjy u<"

"

Primary Street Address:	4; ; 4.'522: "7y "Utggv."4; ; 5'8y "Utggv."57; 8'Ego o gteg."("4; ; 5" O kukqp"Kp"Cxgpwg"			
City: Tlxgtul'g"	County: Tlxgtul'g"	State: Ecrkhtplc"		
Tax ID/Parcel Number:	433/244/248."433/244/249."433/293/223."433/293/224."433/293/226."433/293/227."433/293/245."433/293/246."433/294/224."433/294/226."433/294/242."433/294/243"			
Approx. Land Area:	80 ; "cetgu"			
Apprx. Latitude/Longitude:	P qt vj "6208659; 2'f gi tgguy guv'950 8; ; ; 32'f gi tggu"			
Additional Details (if appl.):	P C"			
Property Owner:	Tlxgtul'g"Uetr "Kqp"cpf "O gvcnEqtr 0"			
Zoning Designation:	O 4"o"Kp'f wutkn"Ego o gtekn" Tgukf gpvkn"			

"

2.3 Data Gaps

"

C" data gap" ku'f ghkpgf "d { "vj g"CUVO "cu"e"rcen'qh'qt" kpcdkk { "vq"qdvkpv" kphqto cvkqp" tgs wkt gf "d { "vj ku" r tceveg" f gur kwg' i qqf "hckj" ghqt u' d { "vj g"gpukxgpo gpvcn' r tqhguukqpcn'vq" i cvj gt' uvej "kphqto cvkqp0C" f cvc" i cr "ku"qpn { "uki pkkcepv"kh"qvj gt "kphqto cvkqp" cpf kt "r tqhguukqpcn'g zr gtlgpeg" tckugu" tgcuaqpcdn" eqpegtpu" kpxqmkpi "vj g'f cvc" i cr "cpf "vj g'cdkkk { "vq" f gvto kpg"vj g'r t guppeg"qt "cdugpeg"qh'tgeqi pk gf " gpukxgpo gpvcn' eqpf kkkpu' Vj g" hqmjy kpi "vdrng" uwo o ct k gu" f cvc" i cr u" gpeqwpvgtgf " f wtkpi "vj g" cuuguu gpv'cu'y gm'cu"e" f kuewukqp"qh'vj gkt "uki pkkcepv0"

"

"

"

Data Gap:	Significant (Yes/No)?	Discussion
J kxqtkecnitgeqt f u'f cv' hckmwtg"	P q"	Vj g'f cvg'cpf lqt'v' r g'qh'vj g'htuv'f gxmqr gf 'wug'qh'vj g'Rtqr gtv' 'y cu' pqv'f qewo gpv'f 0" " Tgeqt f "i cr u'gzeggf kpi "hkg" { gctu'y gt g'gpeqwpvgt gf =j qy gxtg."pq" uli pkklecpv'ukg'wug'ej cpi gu'ctg'uwur gev'f 'f wtkpi "vj gug'kpvgtxcnu'0"
Tgur qpug'v'ci gpe{ 'tgeqt f u' tgs wguu'pqvt'gegkxgf "cu'qh'f cvg" qh'tgr qtv'0"	P q"	Cp{ 'cf f kxqpcn'kphqto cvkq'kpf kec'v'g'qh'c' TGE'y knidg'hqty ctf gf " vr qp't'gegkr v'0"

2.4 User Reliance

Vj ku'tgr qtv'ku'hqt "vj g'gzemuxg'wug'qh'vj g'Wugt *u+'pco gf "qp"vj g'htqpv'eqxgt0P q"qyj gt'r ctv' *kgu+ uj cml'j cxg'cp{ 'tki j v'v'q'tgn' "qp"vj g'eqpv'qh'vj ku'tgr qtv'y kj qw'htuv'qdv'kpi "vj g'eqpugv'qh'vj g' qtki kpcn'tgr qtv'Wugt=cpf 'y kj qw'qdv'kpi 'y tkwgp'eqpugv'htqo 'J km cpp'k'vj g'htqo 'qh'c'igwgt'qh' tgrkpeg'qt'tgr qtv'tgegt v'kckv'kq0"

2.5 Significant Assumptions

Vj g'hqmy kpi "uki pkklecpv'cuwo r vkpu'ctg'o cf g<"

- Vj g'ukg'qr gtcvkpu'cv'vj g'v'ko g'qh'vj g'ukg'xkuk'ctg'cuwo gf "v'g'gh'ge'v'v' r kecn'ukg'eqpf kxqpu' tgr'v'xg'v' q" r qv'p'kcn' gpxk'qpo gpvcn'eqpf kxqpu' cpf "vj cv' pq" eqpegcno gpv' qh' gpxk'qpo gpvcn' eqpf kxqpu'qt'tgrgcugu'd{ 'ukg'qy pgtu'qt'qee'w'cpw'j cu'qee'wtgf 0Nkngy kug.'k'ku'cuwo gf 'vj cv'pq' ctgcu' qh' vj g' Rtqr gtv' "y kj " r qv'p'kcn' gpxk'qpo gpvcn'eqpegtpu' qt "TGEu" y gtg'eqpegcng' qt " qyj gty kug'p'qv'tgr qtv'f . 'k'v'p'kpcn' "qt'w'p'p'qy kpi n' . 'd{ 'vj g'Rtqr gtv' "qy pgtu'qee'w'cpw'cpf lqt " ukg'gueqt'v'cv'vj g'v'ko g'qh'vj g'ukg'xkuk'0"
- Hqt'vj g'r'wtr qug'qh'guko cvkpi "vj g'cr r tqzko cvg'f'k'ge'v'k'p'qh'i tqwpf y cvgt'hqy "k'vj g'cdugpeg'qh' ukg'ur gekh'e'i tqwpf y cvgt'f'cv' . "w'p'guu'k'p'f'kecv'g' "qyj gty kug.'cp'cuwo r vkp'j cu'dggp'o cf g'vj cv' vj g'i tcf k'p'v'q'h'i tqwpf y cvgt'hqy 'h'qmy u'vj g'w'w'hc'eg'v'qr qi ter j { "qh'vj g'Rtqr gtv' 'cpf 'ko o gf k'cv'g' uwtqwpf kpi 'ctgc0"

2.6 General Limitations and Exceptions

2.6.1 Limitations

Vj g'tgr qtv'wtpctqwpf "v'ko g'ur gekh'gf "d{ 'vj g'eqpv'cev'ci tggg'gpv'ht'vj ku'cuuguo gpv'o c{ 'r' t'gugp'v'c' rko kcv'kq' v' " vj g' c'x'k'c'd'k'k'v' " qh' r g't'v'p'p'v' tgi w'v'qt{ " ci gpe{ " tgeqt f u' Uwej " rko kcv'kpu." kh' gpeqwpv'gt gf . 'ctg'ht'vj gt'ur gekh'gf "k'p'Uge'v'k'p'7060"

Uki pkklecpv'ko kcv'kpu'tgr'v'gf "v'vj g'eqpf kxq'p'qt'ceegu'k'd'k'k'v' "qh'vj g'Rtqr gtv' 'cv'vj g'v'ko g'qh'vj g'ukg' tgeqppcku'cpeg.'kh'g'p'eqwpv'gt gf . 'ctg'tgr qtv'gf "k'p'Uge'v'k'p'7080"

2.6.2 Other Exceptions or Deletions

P q"qyj gt'gzegr vkpu'qt'f'gr'v'k'p'u'htqo "vj g'CUVO "U'c'p'f'ctf "G3749/35'ctg'tgr qtv'gf 0"

2.6.3 Special Terms and Conditions

Vj ku'Rj cug"KGpxktqpo gpvcn'Ukg"Cuuguuo gpv'j cu'dggp'r tgr ctgf "wukpi "tgcupcdng"ghqtu"kp"gej " r j cug"qh"ku"y qtm'vq"kf gpvkh"tgeqi pl gf "gpvktqpo gpvcn'eqpf kkpqu"cuuqekcvf "y kj "j c| ctf qwu" uwducpegu."y cuvgu"cpf "r gtrqrgwo "r tqf weu"cv'y g"Rtqr gtv'0"Hkp'kpi u'y kj kp'y ku'tgr qtv'ctg"dcugf " qp"lphqto cvkqp"eqmgev"ftqo "qdugtxcvku'p'o cf g"qp'y g'f c{"qh'y g'ukg"tgeappckuucpeg"cpf "ftqo " tgcupcdn' "cuetvckpcdng"lphqto cvkqp"qdvckpgf "ftqo "i qxgtlpi "r wdre"ci gpekgu'cpf "r tkxcvg"uqtegu0"

Vj ku'tgr qtv'ku"pqv'f ghpkkg"cpf "uj qwf "pqv'dg"cuwo gf "vq"dg"ceqo r ngvg"qt"ur gekhe"fg hpkkqp"qh" y j g"eqpf kkpqu"cdqvg"qt"dngy "i tcf g0"lphqto cvkqp"kp"y ku'tgr qtv'ku"pqv'kpvpgf gf "vq"dg"wugf "cu"ce" eqputwekqp" f qewo gpv' cpf "uj qwf "pqv" dg" wugf "hqt" f go qrkklp."tgpqxcvqp."ukg" f gxgmr o gpv." tgf gxgmr o gpv."qt"qvj g"eqputwekqp"r wtr qugu0P q'tgr tguvpvckqp"qt'y cttecpv'ku'o cf g'y cv'y g'r cuv' qt"ewttgpv'qr gtcvku'cv'y g"Rtqr gtv' "ctg."qt"j cxg"dggp."kp"eqo r rkepeg"y kj "cm'cr r rkecdng"hgf gtcn" ucvg'cpf "hccn'rcy u."tgi wrcvku'cpf "eqf gu0"

Hkp'kpi u."eqpenwukpu" cpf " tgeqo o gpf cvkqu" r tguvpvgf " kp" y ku" tgr qtv' ctg" dcugf " qp" xkuwcn' qdugtxcvku'qh'y g"Rtqr gtv'."kpvtxlgy u"eqpf wevgf."y j g'tgeqtf u'tgxlgy gf."lphqto cvkqp"r tqxkf gf "d{" y j g"Enkpv"cpf lqt"ce'tgxlgy "qh'tgcf kl "cxckrdng"cpf "uwr r nkgf "f tcy kpi u'cpf "f qewo gpv0lphqto cvkqp" qdvckpgf "f wtkpi "y j g"cuuguuo gpv."y j gyj gt"y tkwgp."i tcr j le"qt" xgtdcn"r tqxkf gf "d{" y j g"Rtqr gtv' " eqpvcev"u"qt"cu"uj qy p"qp"cp{"f qewo gpv'utgxlgy gf "qt"tgegkxgf "ftqo "y j g"Rtqr gtv' "eqpvcev"qy pgt"qt" ci gpv."qt" i qxgtpo gpv"ci gpe{"uqwtg="ku"cuwo gf "vq"dg"ceewtce"gzegr v"cu"ur gekhecm{"ucvgf " qvj gty kug'kp"y ku'tgr qt0kpf gr gpf gpv'xgtkhecvkqp"qh'y g'ceewtce{"qt"eqo r ngvpguu"qh'cm'lphqto cvkqp" tgxlgy gf "qt"tgegkxgf "f wtkpi "y j g'eqwtug"qh'y ku"cuuguuo gpv'ku"pqv'o cf g'cpf "gzenvf gf "ftqo "y j g'ueqr g" qh'y qtnihqt"y ku"cuuguuo gpv0P q"y cttecpv' "qt"i wctcpvgg"ku'o cf g'qh'y g'ceewtce{"qt"eqo r ngvpguu"qh' lphqto cvkqp" y cv"y cu" qdvckpgf "ftqo "quvgpukdn' "npqy ngf i gcdng" kpf kxkf wcu."tgi wrcvt{"ci gpe{" tgr tguvpvckxgu"qt"qvj gt"ugeqpf ct{"uqwtegu0"

Tgi ctf nguu"qh'y j g"lph'kpi u"ucvgf "kp"y ku'tgr qtv"J km cpp"ku"pqv'tgur qpukdng"ht"eqpugs wpegu"qt" eqpf kkpqu"ctkupi "ftqo "hcew"y cv'y gtg"eqpegcngf."y kj j gf "qt"pqv'hwm{"f kuernugf "cv'y g"ko g"y j g" cuuguuo gpv'y cu'eqpf wevg 0"

Vj ku'tgr qtv'f qgu"pqv'y cttecpv'ci ckpu'hwwt g"qr gtcvku'qt"eqpf kkpqu."pqt" f qgu"kv"y cttecpv'ci ckpu' qr gtcvku'qt"eqpf kkpqu"r tguvpv'qh'c"v'r g"qt"cv'c"rkecvkqp"pqv'kpxguki cvgf 0"

Vj g"tgi wrcvt{"f cvdcug"tgr qtv'r tqxkf gf "ku"dcugf "qp"cp" gxcnvcvku'qh"y j g" f cv" eqmgev" cpf " eqo r krgf "d{"c"eqpvtcevgf "f cv"tgugetej "eqo r cp{"0"Vj g'tgi wrcvt{"tgugetej "ku" f guki pgf "vq"b ggv'y g" tgs wkt go gpw"qh"CUVO "Ucpcf ctf "G"3749/350"J km cpp"ecp"pgkj gt"y cttecpv'pqt"i wctcpvgg"y j g" ceewtce{"qt"eqo r ngvpguu"qh'y g'lphqto cvkqp"qdvckpgf "ftqo "y j g'tgi wrcvt{"f cvdcug"tgr qtv'r tqxkf gf" f wtkpi "y j g'eqwtug"qh'y ku"cuuguuo gpv0"

Udwthceg"eqpf kkpqu"o c{"f khgt"ftqo "y j g'eqpf kkpqu"ko r nkgf "d{"y j g'uwthceg"qdugtxcvku'cpf "ecp" qpn' "dg'tgkcdn' "gxcnvcv"y tqwi j "kpvwukg"gej pls wgu0"

Tgcupcdng" ghqtu" j cxg" dggp" o cf g" f wtkpi " y ku" cuuguuo gpv' vq" kf gpvkh" cdqvgi tqwvf " cpf " wvf gti tqwvf "uqtc"i g"cpmu"cpf "cpekmt{"gs wkr o gpv0Tgcupcdng"ghqtu"ctg"rko kgf "vq"lphqto cvkqp" i ckpgf "ftqo "xkuwcn'qdugtxcvku'qh'rci gni "wpqduwewvgf "ctgeu."tgeqtf gf "f cvdcug"lphqto cvkqp"j grf " kp'r wdre"tgeqtf "cpf "cxckrdng"lphqto cvkqp"i cvj gtgf "ftqo "kpvtxlgy u0Uwej "b gyj qf u'o c{"pqv'kf gpvkh" "

"

uwthlekn'cpf "uwduwthceg'hgcwtgu'vj cv'o c{ 'j cxg'dggp'j kf f gp'htqo 'xkgy 'f wg'vq'r ctmgf "cwqo qdkrgu"
cpf "qyj gt'xgj lergu.'upqy 'eqxgt.'xgi gvcxg'i tqy vj . 'r cxgo gpv.'eqpwtwekqp'qt 'f gdtku'r krg'uvqtc i g'qt "
kpeqttgevlphqto cvkqp'htqo 'uqwtegu0'
"

P q"i wctcpvgg. "gZR rlek'qt "ko r nkgf. "ku'o cf g"vj cv'vj g'tgeqtf u'r gtvcokpi "vq"j kvqtkecn'qy pgtuj k' "qt "
qeewr cpe{ 'y j kej 'y gtg'tgxkgy gf 'tgr tgugpv'c'eqo r tgi gpukxg'qt 'r tgekug'f grkpgcvkqp'qh'r cuv'Rtqr gtv' "
qy pgtuj k' "qt 'vgpcpe{ 'hqt'rgi cnr wtr qugu0'
"

Vj g"CUVO "G3749/35"ucpf ctf "ucvgu"vj cv'tgeqo o gpf cvkqpu'ctg'pqv'tgs wktgf "vq"dg'kpenmf gf "kp"c "
Rj cug'KGUC'tgr qtv'j qy gxgt.'hwtvj gt'vj cv'tgeqo o gpf cvkqpu'ctg'cp'cf f kkpncn'ugtxleg'vj cv'o c{ "dg"
wughwlp'vj g'Wugt'au'cpcn'uku'qh'ncpf qy pgt'kcdkx' 'r tqvgevkqpu'qt 'dwukpguu'gpxtqpo gpvcnT kumu="cpf "
vj cv'vj g'Wugt'uj qwf "eqpukf gt'y j gj gt'tgeqo o gpf cvkqpu'ht'cf f kkpncn'kps wktlgu'qt'qyj gt'ugtxlegu "
ctg'f guktgf 0"
"

Vj g'tgeqo o gpf gf 'tgr qpug'cevqpu'vq'vj g'kf gpvkhgf "TGEu'r tgugpv'kf "kp"Ugevqpp'305. 'kh'cp{. 'ctg'pqv "
kpvpgf gf "vq'tgr tgugpv'vj g'qpn{ "eqwtug*u+'qh'cevqpu'vq'vcng="pqt "f qgu'k'ko r n{ "cp{ "qr kkp'cu'vq'vj g "
vko kpi "qh'vj g'cevqpu0'hwvj gto qtg."k'ku"go r j cuk gf "vj cv'cf f kkpncn'tgur qpug'cevqpu'o c{ "dgeqo g "
y cttcpvgf " f gr gpf kpi " qp" vj g" qweqo g" qh" vj g" kpkcn' cevqpu*u+ vcnpg0' J km cpp" cf xkugu" vj cv "
eqpuwncvqpu'y kj "rgi cn'eqwpugri'ho kkt'y kj "gpxtqpo gpvcn'cpf "tgcn'gucv'rcy "o c{ "dg'dgpg'hekn "
vq'vj g'f gekukqp"o cnkpi "r tqeguu'ht'vj g'v{r g'cpf "vko kpi "qh'c'tgur qpug'cevqpu'vq'kf gpvkhgf "TGEu."kh "
cp{ 0"
"

F wg'vq'vj g'iko kkgf "pcwtg'qh'qwt'tgxkgy "qh'r qvqpcn'Dwukpguu'Gpxtqpo gpvcnT kumu.'vj g'Wugt'qh'vj g "
tgr qtv'lj qwf "eqpukf gt'y j gj gt'vq'vcng'cf f kkpncn'cevqpu*u+'vq'hwvj gt'f ghkg. 'tqr gtn' 'o cpci g'cpf lqt "
o kki cvg'r qvqpcn'DGTu0"
"

Kp"vj g'gxgpv'qh'cp{ "eqphkev'dgy ggp"vj g'vgtu u'cpf "eqpf kkp'cu'vq'vj g'ku'tgr qtv'cpf "vj g'vgtu u'cpf "
eqpf kkp'cu'vq'vj g'eqpuwncvqpu' "ugtxlegu'ci tggg gpv'ht'vj ku'r tqlgev.'vj g'eqpuwncvqpu' "ugtxlegu'ci tggg gpv "
uj cm'eqpvtqr0'
"

3.0 USER PROVIDED INFORMATION

Vj g"vgtö "öWugtö"ku"fg hkgf "d{ "CUVO "cu"vj g"r ctv{ "uggnkp "v"vug"Rtceveg"G3749"v"eqo r rgyg"cp" gpvktqpo gpvnlukg"cuuguuo gpv'qh'vj g'Rtqr gtv{ "ur gekkdecmf . 'vj g'gpvklgu'pco gf "qp'vj g'htqpv'eqxgt "v" y j kej "vj g'tgr qt v'j cu'dggp"cf f tguugf 0"

3.1 Prior Environmental Reports/Documentation

Vj g'hqmy kpi "r tkqt"gpvktqpo gpvnl'tgr qt v'lf qewo gpv'v'kp'y cu'r tqxkf gf <"

Rj cug"K'Gpvtqpo gpvnl'Ukg"Cuuguuo gpv."4; ; 4."522: "7^y"Utggv."4; ; 5"8^y"Utggv."57; 8"Eqo o gteg." 4; ; 5"O kulqp"Kpp"Cxgpwg." r tgr ctgf "d{ "J kmo cpp"Eqpuwv'kpi "cpf "f cvgf "Hgdwtct{ "4; ."42380' J kmo cpp'u'r t'gxlqwu"Rj cug"K'cuq"t'gxlgy gf "ugxgten'r tkqt "Rj cug"K'cpf "Rj cug"K'kpxgukl cv'kpu0"Vj g" Rj cug"K'tgr qt v'lpf kcvgf "vj g'hqmy kpi <"

“Recognized Environmental Conditions (RECs):

- *The known soil contamination, due to the former metal recycling operations, including PAHs, SVOCs, TPHs, PCBs, heavy metals, and VOCs, as set forth in multiple Phase II Subsurface Investigation Reports and Supplemental Phase II Subsurface Investigation Reports, is considered to be a REC in connection with the Property.*
- *The known contamination left in place after three (3) UST closures at 2993 6th Street, is considered to be a REC in connection with the Property.*
- *The history of industrial usage at the Property is considered to be a REC in connection with the Property.*
- *Hillmann observed two (2) 55-gallon drums with what appeared to be waste oil and three (3) additional drums which were full and unlabeled within the former equipment maintenance area of the warehouse building. Both sets of drums were stored in secondary containment. Hillmann observed thirteen (13) empty 55-gallon drums and one storing copper chips within the warehouse building. No leaking or staining was observed in the vicinity of any of the drums. Three (3) 5-gallon gas cans, five (5) 5-gallon diesel cans, and three (3) 5-gallon buckets of oil were observed in secondary containment within the warehouse. Additionally, Hillmann observed several oil pans which appeared to contain some amount of used oil, chemicals stored within a flammable safety cabinet and miscellaneous chemicals stored in the manufactured containers throughout the warehouse.*
- *Significant pavement staining was observed in the vicinity of the concrete posts where the balers were formerly mounted. In at least one area, the staining from the concrete baler pad continued onto bare soil. One large stain was observed on the concrete pad at the southern end of the former conveyor belt at the southwestern portion of the Property, just behind the former storage building. De minimis staining was observed on the pavement and soils throughout the Property.*
- *Regulatory database listings identify current and historic adjoining properties as a fertilizer facility, automobile and truck service stations, Standard Oil Co., and brownfields properties, are considered to be a REC in connection with the Property.*

- *Inaccessible areas including the bottoms of former scale pits, conveyor pit, and abandoned structure at 2993 Mission Inn Avenue are considered to be RECs in connection with the Property.*
- *Hillmann observed several rails and wood beams within the former railroad right-of-way supporting the possibility that railroad ties may be present just below the surface soil. Railroad ties are known to be treated with oil-based and tar-based chemicals such as creosote, and are considered to be a REC in connection with the Property.*

Controlled Recognized Environmental Conditions (CRECs):

- *No evidence of any CRECs in connection with the Property was identified.*

Historical Recognized Environmental Conditions (HRECs):

- *Closure of a 10,000-gallon diesel UST at 3033 5th Street, including analysis of soils beneath the tank at 62 mg/kg TPHd kept in place, is below residential cleanup levels and is considered to be a HREC in connection with the Property.*
- *The closure of a reported 1,000-gallon UST at the southeast corner of the warehouse at 3596 Commerce Street with a known release, reported cleanup with regulatory closure is considered to be a HREC in connection with the Property.*

Tgxkugf "Tgo gf kcn'Cevkqp"Rrcp."Tlxgtukf g"Ueter "Kqp"("O gxcn"4; ; 5"Ukzj "Utggv."Tlxgtukf g."Ecrkhtplc" : 4729."FVUE" "Fqemv"J CU/H| 37B8/374="r tgr ctgf "d{ "I UKGpxktqpo gpvcn" f cvgf "Lwn" 45."423; ."tgxkugf" Lcpwct { "4."42420"Vj g" Tgo gf kcn'Cevkqp"Rrcp"*TCR+qdlgevxg"y cu"ucvfg"cu." "to remove soil impacted with COCs above residential criteria and dispose of it cost-effectively and safely. This will require a program of targeted removal followed by a broad Site-wide excavation plan. The off-Site residential areas will be excavated during the targeted on-Site excavation work and the impacted soil will be brought on-Site to be temporarily staged prior to off-Site disposal. " "Vj g" f gxcvfg" r rcpu"ht" y g" tgo qxcn"cpf" qh"ukg" f kur qucn"qh" uwthekcn"uqku"vq" c" f gr vj "qh"3Q"vq"40" "hggv"qxgt" cr r tqzko cvgn" 70" cetgu" hqmqy gf "d{ "uqkn"eqphko cvkqp" uco r rki 0Vj g" g'vko cvgf "xqno g"qh'uqkntgo qxcnly cu"4: .422"ewdle" { ctf u."qt"67.826"vqu0Vj g"TCR"lpf kcvfg" vj cvc"uo cnlr qt vqp"qh"v ku"o cuu"ku"j ki j n" lo r cevgf "cpf" b c { "dg"ercuukhgf "cu"j c| ctf qwu"y cug0"

3.2 User Questionnaire

Ugevkqp"8"qh"vj g"CUVO "G3749/35"ucvfg ctf "f guetkdu"egt vcp"vcumu'tgs vkt gf "vq"dg"r gthqto gf "d{ "vj g" tgr qtv" Wugt"kp"qt f gt"vq"s wcrkh{ "hqt"rcpf qy pgt"rkdckkx{ "r tqvgevkpu"vq"EGTENC"rkdckkx{ 0"Vq"cuukv" vj g" tgr qtv" Wugt" vq" o ggv" vj gug" tgs vkt go gpvu. "vj g" CUVO " G3749/35" ucvfg ctf " tgeqo o gpf u" c" s wgvkqppck g" qh" lps vkt ku" *Wugt" S wgvkqppck g+" ur gekhgf "kp" 62" EHT" 53407." 53404: ." 53404: ." 534052." cpf "534053"dg"t tqxkf gf "vq"vj g"qt ki kpcrit gr qtv" Wugt"0" C" Wugt" S wgvkqppck g"j cu"dggp"r tqxkf gf " vq"vj g"tgr qtv" Wugt"=j qy gxgt. "c"eqo r rvgf "s wgvkqppck g"y cu"pqv'tgwtpgf "vq"J kno cpp0"

Question:	Yes/No:	Detail:
Environmental liens that are filed or recorded against the property: Fk" c"ugctej "qh"tgeqtf gf "rcpf "vkg"tgeqtf u"kf gpvkh{ "cp{ " gpvktqpo gpvcn"hgpu"hgkf "qt"tgeqtf gf "ci clpu"vj g"r tqz gtv" wpf gt" hgf gtcn"vtdcn"ucvfg"qt" hqecnlxy A"	PT	No Response
Activity and use limitations that are in place on the property or that have been filed or recorded against the property:	PT	"

"

Question:	Yes/No:	Detail:
<p>F kf 'c'ugctej 'qhtgeqtf gf 'ncpf 'kng'tgeqtf u'*qt 'lwf lekcn'tgeqtf u' y j gtg'cr r tqr tlcvg. 'kf gpvkh' 'cp{ 'CWnu.'uwej 'cu'gpi kpggtkpi " eqpvtqnu.'ncpf 'wug'tgutkvwqpu'qt 'kpukswwkqpcn'eqpvtqnu'yj cv'ctg'kp" r nreg'cv'yj g'r tqr gtvf 'cpf kt'j cxg'dggp 'hrgf 'qt'tgeqtf gf 'ci clpuv' yj g'r tqr gtvf 'wvf gt 'hgf gtcn'v'kdcn'ucvg'qt 'hjecn'hy A'</p>		
<p>Specialized knowledge or experience of the person seeking to qualify for the LLP:" F q' { qw'j cxg'cp { 'ur gekcn' gf 'mpqy nfi g'qt'gzr gtlgpeg'tgrv'gf "vq" yj g'r tqr gtvf 'qt'pgctd { 'r tqr gtv'guA'ht'gzco r ng.'ctg' { qw' kpxkrgf 'kp'yj g'uco g'hpg'qh'dwukpguu'cu'yj g'ewtgpv'qt'htgo gt" qeewr cpw'qh'yj g'r tqr gtvf 'qt'cp'cf lqkpkpi 'r tqr gtvf 'uq'yj cv' { qw' y qwf 'j cxg'ur gekcn' gf 'mpqy nfi g'qh'yj g'ej go lecn'cpf " r tqeguu'wugf 'd { 'y ku'v' r g'qh'dwukpguuA'</p>	PT"	"
<p>Relationship of the purchase price to the fair market value of the property if it were not contaminated: F qgu'yj g'r wtej cug'r tleg'dgkpi 'r ckf 'hqt'yj ku'r tqr gtvf 'tgcucpdcn' " tghge'v'yj g'hkt'o ctngv'xcnwg'qh'yj g'r tqr gtvf 'A'K' { qw'eqpen'w'f g' yj cv'yj gtg'ku'c'f'khtgpeg.'j cxg' { qw'eqpuk'f'gtgf 'y j g'v'j gt' yj g'ny gt" r wtej cug'r tleg'ku'dgecwug'eqp'co kpcv'kp'ku'hpqy p'qt'dgr'kxgf "vq" dg'r tgugpv'cv'yj g'r tqr gtvf A' "</p>	PT"	"
<p>Commonly Known or Reasonably Ascertainable Information: Ctg' { qw'cy ctg'qh'eqo o qpn' 'mpqy p'qt'tgcucpdcn' 'cuetv'kpcdn' " kphqto cv'kp'cdqw'yj g'r tqr gtvf 'yj cv'y qwf 'j g' r 'yj g' g' gpxk'qpo gpcn'r tqh'guukqpcn'v'kf gpv'kh' 'eqpf kkp'pu'lpf lecv'xg'qh' tgrgcugu'qt'yj tgcvgpgf 'tgrgcuguA'ht'gzco r ng. "</p>	"	"
<p>/F q' { qw'hpqy 'yj g'r cuv'wugu'qh'yj g'r tqr gtvf A'</p>	PT"	"
<p>/F q' { qw'hpqy 'qh'ur gek'ke'ej go lecn'yj cv'ctg'r tgugpv'qt'y gtg" qpeg'r tgugpv'cv'yj g'r tqr gtvf A'</p>	PT"	"
<p>/F q' { qw'hpqy 'qh'ur knu'qt'qy gt'ej go lecn'tgrgcugu'yj cv'yj cxg" vengp'r nreg'cv'yj g'r tqr gtvf A'</p>	PT"	"
<p>/F q' { qw'hpqy 'qh'cp { 'gpxk'qpo gpcn'engcpw u'yj cv'yj cxg'v'engp" r nreg'cv'yj g'r tqr gtvf A'</p>	PT"	"
<p>The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation:" Dcugf "qp" { qw'hpqy nfi g'cpf "gzr gtlgpeg'tgrv'gf "vq" yj g'r tqr gtvf " ctg'yj gtg'cp { 'qdxk'qwa'lpf lecv'qtu'yj cv'r qkp'v'v'yj g'r tgugpeg'qt" rkn'gn' 'r tgugpeg'qh'tgrgcugu'cv'yj g'r tqr gtvf A'</p>	PT"	"
<p>Litigation/Administrative Proceedings/Government Notices Cu'yj g'w'gt'qh'yj ku'GUC. "f q' { qw'j cxg'hpqy nfi g'qh'*3+'cp { " r gpf kpi . 'yj tgcvgpgf . 'qt' r cuv'k'ki cv'kp'tgrg'xcp'v'q'j c' ctf qwu' uwdncpegu'qt'r g'v'qrgwo 'r tqf wew'lp. 'qp.'qt'htgo 'yj g'r tqr gtvf = *4+'cp { 'r gpf kpi . 'yj tgcvgpgf . 'qt' r cuv'cf o k'p'k'w'xg'r tqeggf kpi u' tgrg'xcp'v'q'j c' ctf qwu' uwdncpegu'qt'r g'v'qrgwo 'r tqf wew'lp. 'qp'qt' htgo 'yj g'r tqr gtvf =cpf *5+'cp { 'p'q'v'egu'htgo 'cp { 'i qxgtpo gpcn' gpv'kh' 'tgi ctf kpi 'cp { 'r quuk'ng'x'k'q'v'kp'qh'gpxk'qpo gpcn'hy u'qt" r quuk'ng'htcd'k'k' { 'tgr'v'kpi 'vq'j c' ctf qwu' uwdncpegu'qt'r g'v'qrgwo " r tqf wew'0'</p>	PT"	"

NR-no response

"

"

3.3 Reason for Performing Phase I ESA

"

Vj g'Wugt'f kf 'pqv'lpf kcv'g'vj g'r wtr qug'qh'vj g'cuuguuo gp'0'p'ceeqtf cpeg'y kj 'CUVO 'G3749/35.'k/ku'
cuuwo gf "vj cv'vj g'Rj cug'KGUC'y cu'dgkpi "r gthqto gf "kp"qtf gt"vq"s wckh{ "hqt"rcpf qy pgt"rcdkkv{ "
rtqgevkp"vq'EGTENC'rcdkkv{0"

4.0 RECORDS REVIEW

4.1 Physical Setting Sources

Vj g'hqmny kpi 'r j {ulecrlugwkp 'uqwtegu'y gtg'tgxlgy gf <

Source	Discussion
WUI U907'o kpwg" Vqr qi tcr j le'O cr " F cve<GF T'I gqej gem Rj {ulecrlugwkp 'Uqwteg" Cff gpf wo +"	Vj g'Rtqr gtvl "nku'cv'cp"grgxcvqp"qh'cr r tqzlo cvgnf " : 2"hggv'cdqxg'o gcp"ugc"ngxgr0' Cp" kpvgr tgvvqp"qh'vqr qi tcr j le"eqpvqwt"nkgu'cu'y gm'cu'c'tgxlgy "qh'yj g'GF T'I gqej gem I gpptcn'Vqr qi tcr j le"I tcf kgpv' uwi i guvgf "vgttckp"unr kpi "f qy py ctf "vqy ctf u'yj g'y guv/ pqtvy y gu0' Vj g" emquguv' f qy p" i tcf kgpv' y cvgt" dqf { " ku" yj g" Tlxgtukf g" Epcpn" nqecvfg " cr r tqzlo cvgnf "3; 6'hggv'vq'yj g'y guv/pqtvy y gu0'
WUF C'UEU'Uqkri'F cvc< *GF T'I gqej gemRj {ulecrl' Ugwkp 'Uqwteg'Cff gpf wo +"	Vj g'uqkri'v'r g'cv'yj g'Rtqr gtvl "ku'ercuukhkf "cu'0C'rikpi vqp00Vj ku'uqkri'v'r g'ku'f guetkdgf "cu'hkpg" ucpf { 'nqco 'yj cv'ctg'o qf gtcvgnf 'y gn'c'p'f 'y gn'f tclpfg 'y kj "o qf gtcvgnf 'eqctug'vzwt gu0"
I gqmj le'F cvc< *GF T'I gqej gemRj {ulecrl' Ugwkp 'Uqwteg'Cff gpf wo +"	Vj g'i gqmj le'hqto cvkqp'kp'yj g'xlekp'k'v'qh'yj g'Rtqr gtvl "ku'f guetkdgf "cu'r nwaqple'cpf "kpvwukg" tqemu'qh'yj g'O guql qle'Gtc.'Etgceqqu'U'ungo .'cpf 'Etgceqqu'I tckple'Tqemu'Ugtkgu0'
Rtkqt 'Gpx0T gr qt w< *Ugevkqp'500"	P q'cf f kkpncn'tgrgxcv'v'usk'ur gekhke"i gqmj le'f cvc'y cu'pqvfg "htqo "c'tgxlgy "qh'yj g'r tkqt" gpv'ktpo gpv'nt'gr qt w'rkv'kf "kp'Ugevkqp'500"
Cff kkpncn'Uqwtegu" F cvc<	P q'cf f kkpncn'r j {ulecrlugwkp 'uqwtegu'qt'f cvc'y cu'qdvclpfg 0'
I tqwpf y cvgt 'Hny " F kuewukqp<	Dcugf "qp'c'tgxlgy "qh'yj g'cdqxg'kphqto cvkqp'cu'y gn'cu'qdugtxcvqp"qh'yj g'ukg.'yj g'f kgevkqp" qh'yj cmjy 'i tqwpf y cvgt 'hny 'cv'yj g'ukg'ku'kphgtt'gf "vq'dg'vqy ctf u'yj g'y guv/pqtvy y gu0"
P Y KY gwrcpf u'F cvc< *GF T'I gqej gemRj {ulecrl' Ugwkp 'Uqwteg'Cff gpf wo +"	P q'P Y Ko cr r gf 'y gwrcpf u'ctgcu'y gtg'f gr kvvgf "cv'yj g'Rtqr gtvl 0"

4.2 Historical Use – Property and Adjoining Properties

Tgugctej 'j cu'dggp'eqpf wevgf 'kp'cp'cwgo r v'v'q'f g'xgmr 'c'j kvqt { "qh'yj g'r t'gxlqwu'wugu'qh'yj g'r tqr gtvl "
cpf "uwtqwpf kpi "ctgc."kp'qtf gt "vq"j gr "kf gpv'kh' "yj g'r kngk'k'j qf "qh'r cuv'wugu"j cxkpi "ngf "vq"TG E u'k'p"
eqppgevkqp"y kj "yj g'r tqr gtvl 0' Ucpf ctf "j kvqtkecl' uqwtegu"j cxg" dggp" uqwi j v'kp' cp' cwgo r v'v'q"
f qewo gpv'yj g'r cuv'wugu'qh'yj g'Rtqr gtvl "cu'ht' dcm'cu'k'ecp'dg'uj qy p' yj cv'yj g'Rtqr gtvl "eqpvclpfg "
utwewtgu="qt'htqo "yj g'v'ko g'yj g'Rtqr gtvl "y cu'htuv'wugf "hqt'tgukf gpv'kcn"ci tlewnwtcn"eqo o gtekn"
kpf wutkri'qt' i qxgtpo gpv'nt' wtr qugu0"

4.2.1 Fire Insurance Maps

C'Egtv'k'gf "Ucpdqtp"O cr "Tgr qt v'y cu'qdvclpfg "htqo "GF T' "hqt" c' "t'gxlgy "qh'r wdrkuj gf "j kvqtkecl' "htg"
kpw'cpeg'o cr u'ht' yj g'Rtqr gtvl "cpf "uwtqwpf kpi "ctgc0'Vj g'hqmny kpi "ku'c' uwo o ct { "qh'ukg'wugu'cpf "
pqv'cng'f gwku'f gr kvvgf "d { "yj g'cxck'cdng'o cr u<

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
3: : 9"	Property:	P qv'f gr kvvgf "	P qv'f gr kvvgf "
	Adjoining:	P qv'f gr kvvgf "	P qv'f gr kvvgf "
3: : : 3: ; 3"	Property:	P qv'f gr kvvgf "	P qv'f gr kvvgf "
	Adjoining:	kpf wutkri'	Hwk'Rcentpi "Y ctgj qwug"
3: ; 7"	Property:	kpf wutkri'f y gnkpi "	Eqz'Hggf 'cpf 'Hwgn'Eq0'

"

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
	Adjoining:	T gulf gpvcn "kpf wutken"	Hwks' Rcenkpi " Y ctgj qwug." Tlxgtulf g" Dctrg{ " O km. "Ucpcf ctf "QkiEq0Y ctgj qwug." Tckrtqcf "
3; 2: "	Property:	T gulf gpvcn "kpf wutken"	Qtcpj g"Rcenkpi "Y ctgj qwug."Uwj gtrpf "Hwks' Eq0" Tlxgtulf g" J gli j w" Qtcpj g" I tqy gtu" Cuuqekvqp"Rcenkpi "Y ctgj qwug."Tckrtqcf "
	Adjoining:	T gulf gpvcn "kpf wutken"	Hwks'Rcenkpi " Y ctgj qwug."Ucpcf ctf " Qki' Eq0' Y ctgj qwug."Tckrtqcf "
3; 72.'3; 74." 3; 75.'3; 76." 3; 77"	Property:	T gulf gpvcn "kpf wutken"	Uj gm'QkiEq0Y ctgj qwug'cpf "qki'vcpm."Vtcevq" cpf " Gs wkr o gpv' Uqtci g." Ngtpgtai" Tlxgtulf g" I tclp" O knkpi "Eq0" Tlxgtulf g" J gli j w" Qtcpj g" I tqy gtu" Cuuqekvqp" Rcenkpi " Y ctgj qwug." Cpf tgy 'Dtqu0Tlxgtulf g' I tqy gtu'kpe0'Dqwipi " Y qtmu."Tckrtqcf "
	Adjoining:	T gulf gpvcn "kpf wutken"	Ucpcf ctf " Qki' Eq0' Y ctgj qwug." J cpugp" cpf " I vni" Nwo dgt" [ctf." Hggf" I tkpf kpi " Y ctgj qwug."Y gudtqqmEq0Hwtpkwtg.'P cvkqpcr' Qtcpj g'Eqo r cp{ 'Rcenkpi "J qwug."Uj ggv'O gver' Y qtmu"
3; 79.'3; 7: ." 3; 7; .3; 82." 3; 83.'3; 84"	Property:	T gulf gpvcn "kpf wutken"	Uj gm' Qki' Eq0' Y ctgj qwug." Vtcevq" cpf " Gs wkr o gpv'Uqtci g."Ngtpgtai" Tlxgtulf g" I tclp" O knkpi " Eq0" F twi u" Y ctgj qwug." Dwkf kpi " Uwr r rgu"Y ctgj qwug."Tckrtqcf "
	Adjoining:	T gulf gpvcn "kpf wutken"	Ucpcf ctf " Qki' Eq0' Y ctgj qwug." J cpugp" cpf " I vni" Nwo dgt" [ctf." Hggf" I tkpf kpi " Y ctgj qwug."Y gudtqqmEq0Hwtpkwtg.'P cvkqpcr' Qtcpj g'Eqo r cp{ 'Rcenkpi "J qwug."Uj ggv'O gver' Y qtmu"
3; 87.'3; 8: ." 3; 8; "	Property:	T gulf gpvcn "kpf wutken"Ueter "O gver'Uqtci g" [ctf "	Vtcevq" cpf " Gs wkr o gpv' Uqtci g." Ngtpgtai" Tlxgtulf g" I tclp" O knkpi " Eq0" F twi u" Y ctgj qwug." Dwkf kpi " Uwr r rgu" Y ctgj qwug." Tckrtqcf.'Ueter 'O gver'Uqtci g'[ctf "
	Adjoining:	T gulf gpvcn "kpf wutken"	Ucpcf ctf " Qki' Eq0' Y ctgj qwug." Hggf " I tkpf kpi " Y ctgj qwug."Y gudtqqmEq0Hwtpkwtg.'P cvkqpcr' Qtcpj g'Eqo r cp{ 'Rcenkpi "J qwug."Uj ggv'O gver' Y qtmu"

"

C'eqr { "qh'v' g'Egtvklf "Ucpdqtp"O cr "Tgr qtv'ku'cwcej gf "kp"Cr r gpf kz "F 0"

"

4.2.2 City Directories

"

Cp'GF T'Ekl' F k'gevqt { 'Cduvcev'tgr qt v'y cu'tgxkgy gf 'hqt'f'cw'qhh'qto gt'qeewr cpw'qh'v' g'Rtqr gtv' { au' utggv'cf f t'gu0Vj g'hqmy kpi 'ku'c'i' gpgtcrk' gf 'uwo o ct { "qh'v' g'hkpf kpi u'qh'ekv' { F k'gevqt { 'tgugctej 'hqt' r cu'qeewr cpw'qh'v' g'Rtqr gtv' 0'"

"

Property	
Use(s) / Occupant(s):	Years
Mggp'Nmkcp.'Ht'gf g'leni'Erkhqp"Twj .J c' gp'EGQ.'Tlxgtulf g'Ueter "Kqp"("O gver"	3; 82"
GriF qtcf q'O ctdrg'(" I tckp"	422: "

"

Vj g'GF T'Ekl' F k'gevqt { 'Cduvcev'tgr qt v'y cu'cnu'q'tgxkgy gf 'hqt'rkukpi u'qh'j' kvqtke'qeewr cpw'qh'v' g' r' cf lqk'kpi 'r' tqr gtv'ku0Vj g'hqmy kpi 'ku'c'i' gpgtcr'uwo o ct { "qh'rkukpi u'qh'j' kvqtke'cf lqk'kpi 'r' tqr gtv' " qeewr cpw'c"

"

"

"

Adjoining Properties	
Use and/or Occupant(s)	Years
Ucpcf ctf 'QkñEq0'	3; 67'6"3; 88"
Tkxgtukf g'J gki j w'Qtcpj g'I tqy gtu'Cuqekc'kqp.'Uct'O kñkpi 'Eq"	3; 73'6"3; 82"
Dtcpuhtf 'Cwq'Viko . 'Y tgen'gu.'Tgikcdng' 'Cwq.'Vwi i { 'Tcf kq'Ncd.'Rtgekukq'Ucy 'Y qtmu.'Xcmg{ 'Hggf 'O kñu"	3; 52'6"3; 5; "
Pc'kqpcñ'Qtcpj g'Ego r cp{ "	3; 77'6"4223'"
Xctkqu'kpf wwt kñi'ukgu"	3; 52'6"4223"

"

C'eqr { 'qh'vj g'GF T'Eka' 'F k'gevt { 'tgr qtv'ku'cwcej gf 'k'p'Cr r gpf kz 'F 0"

"

4.2.3 Historical Topographic Maps

"

J kñqtkcñ'vqr qi tcr j k' o cr u' qh' 'y g' Rtqr gtv' " cpf " xlekpkv' " qdvc'kpgf " htqo " cp" GF T" J kñqtkcñ' Vqr qi tcr j k' O cr " tgr qtv' *cu" cwcej gf " k'p' Cr r gpf kz " F + " j cxg" dggp" t'gxkgy gf 0' Vj g' hmqy kpi " k'p'vtr t'gvc'kqp"qh'rcpf "wuci g'y cu'o cf g'd{ 't'gxkgy "qh'vj g'o cr u<"

"

Year(s)	Summary	
3; 23"	Property:	Ugxgtcñ'uo cñ'ut wewt gu"
	Adjoining:	Ugxgtcñ'uo cñ'ut wewt gu"
3; 64"	Property:	Ncti g'y ctgj qwug'ut' r'g'ut wewt gu.'t'cktqcf "
	Adjoining:	Ncti g'y ctgj qwug'ut' r'g'ut wewt gu.'t'cktqcf "
3; 69."3; 75"	Property:	Uj cf gf "v'f g'p'q'v'i g'p'g'tcñ'w'dcp" f' g'x'g'm'r o g'p'v.'t'cktqcf "
	Adjoining:	Uj cf gf "v'f g'p'q'v'i g'p'g'tcñ'w'dcp" f' g'x'g'm'r o g'p'v.'t'cktqcf "
3; 89."3; ; 2"	Property:	Uj cf gf "v'f g'p'q'v'i g'p'g'tcñ'w'dcp" f' g'x'g'm'r o g'p'v.'r'cti g'y ctgj qwug'ut wewt gu.'t'cktqcf "
	Adjoining:	Uj cf gf "v'f g'p'q'v'i g'p'g'tcñ'w'dcp" f' g'x'g'm'r o g'p'v.'r'cti g'y ctgj qwug'ut wewt gu.'t'cktqcf "
4234"	Property:	P q'd'w'k'f kpi " f' g'x'g'm'r o g'p'v'f' g'r' l'ev'g'f " q'p' 'y g'v'q'r qi tcr j k' o cr "
	Adjoining:	P q'd'w'k'f kpi " f' g'x'g'm'r o g'p'v'f' g'r' l'ev'g'f " q'p' 'y g'v'q'r qi tcr j k' o cr "

4.2.4 Historical Aerial Photographs

"

J kñqtkcñ'cgtkñ'r j qvqi tcr j u'qh' 'y g' Rtqr gtv' " cpf " xlekpkv' " qdvc'kpgf " htqo " cp" GF T" Cgtkñ'Rj qvq' F gecf g'Rcenci g'tgr qtv.'cu'cwcej gf 'k'p'Cr r gpf kz 'F . 'y g't'gxkgy gf 0'Vj g'hmqy kpi 'k'p'vtr t'gvc'kqp"qh' r'cpf "wuci g'y cu'o cf g'd{ 't'gxkgy "qh'vj g'cgtkñ'r j qvqi tcr j u<"

"

Year(s)	Summary of Interpretation	
3; 53."3; 5; . "	Property:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu.'t'cktqcf "
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"
3; 6; . "3; 75." 3; 7; "	Property:	k'p'f wwt kñi'y ctgj qwugu.'t'w'p'm'i'ue'ter { c't'f u.'t'cktqcf ""
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"
3; 88."3; 8; . "	Property:	k'p'f wwt kñi'y ctgj qwugu.'t'w'p'm'i'ue'ter { c't'f u.'t'cktqcf ""
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"
3; 97."3; 9; . "	Property:	k'p'f wwt kñi'y ctgj qwugu.'t'w'p'm'i'ue'ter { c't'f u.'t'cktqcf ""
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"
3; ; 7."3; ; ; . "	Property:	k'p'f wwt kñi'y ctgj qwugu.'t'w'p'm'i'ue'ter { c't'f u.'t'cktqcf ""
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"
3; ; 2."3; ; 6." 4224."4228." 422; . "4234"	Property:	k'p'f wwt kñi'y ctgj qwugu.
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"
4238"	Property:	k'p'f wwt kñi'y ctgj qwugu.
	Adjoining:	T guk'f g'p'v'k'ñ'j qo gu.'k'p'f wwt kñi'y ctgj qwugu"

"

"

"

4.2.5 EDR High-Risk Historical Records

Vj g'GF T "Tcf kwu'O cr I tgr qtv'y j kej 'ku'f kuewugf 'kp'i tgcvtg'f gcknk'Ugevkqp'605. r tqxkf gf 'c'bgctej " qh'r tqr tkgvt { 'f cvdcugu"qh'r qvpgv'cn'j kvqtkecn'j ki j /tkun'wugu'cv'qt "kp"vj g'xlekp'kv' "qh'vj g'Rtqr gtv'0' Vj gug'f cvdcugu'kpenw'f g'GF T "J kvqtke'Engcpgtu'6" c'f cvdcugu"qh'r tqr gtv' "cf f tguugu'y kj 'tgeqtf u'qh' j kvqtkecn'qeevr cpe { 'd { "uwur gev'f "engcpgtu'dwukpguugu="GF T "J kvqtke' "C wq'6" c'f cvdcugu"qh'r tqr gtv' " cf f tguugu'y kj "tgeqtf u'qh'j kvqtkecn'qeevr cpe { "d { "r qvpgv'cn'cwqo qv'xg"i cul'knk'pi "uc'v'kpu"cpf " tgr ckt "hckkk'ku="cpf "GF T "O I R/"c" f cvdcugu"qh'ukv'gu'j kvqtkecn' "qeevr kgf "d { "o cpw'cewtgf "i cu' r rnpu"cpf "tgr v'gf "hckkk'ku0"

EDR Database	On-site Listings:	Adjoining/Off-Site Listings
Historic Cleaners: *qp/ukg'kf lq'k'kpi "qpn'+"	P qpg"	P qpg"
Historic Auto: *qp/ukg'kf lq'k'kpi "qpn'+"	P qpg"	P qpg"
MGP: *3/o kg'f kucpeg'f"	P qpg"	P qpg"

4.2.6 Petroleum/Natural Gas Well Review

Vj g'j kvqtkecn'tgeqtf "uqwtegu"cpf "vj g'Ecn'k'qtpk'I gqmi ke'Gp'gti { "O cpci go gpv'F kx'k'k'k'p' "Ecn' GO "+" qpn'k'p'o cr r kpi "cr r dec'v'k'p'y g'tg'x'k'g'y gf "h'q't'geqtf u'qh'j kvqtke'r gvt'q'rg'w'o "cpf l'q't'pcw't'cn'i cu'y g'm'i' c'v'j g'Rtqr gtv'0'P q't'geqtf "qh'cp { 'j kvqtkecn'r gvt'q'rg'w'o l'pcw't'cn'i cu'y g'm'i'c'v'q't'cf l'q'k'k'k'pi "vj g'Rtqr gtv' " y cu'kf gp'w'k'k'f 0""

4.2.7 Additional Historical Data

Y j g'tg'cr r dec'd'rg. "vj g'h'q'm'y kpi "cf f k'k'q'pc'n'r g't'v'p'p'v'j kvqtkecn'f c'v'y cu'q'd'v'k'p'g'f <"

Interviews/Anecdotal:	P q'cf f k'k'q'pc'n'r g't'v'p'p'v'j kvqtkecn'f c'v'y cu'q'd'v'k'p'g'f 0'
Local Gov't Records:	P q'cf f k'k'q'pc'n'r g't'v'p'p'v'j kvqtkecn'f c'v'y cu'q'd'v'k'p'g'f 0""
Prior Env. Reports: *Ugevkqp'508+"	Rt'k'q't'gp'x'k'q'p'o gp'v'cn't'gr'q't'u't'g'x'k'g'y gf "cu'r'c't'v'q'h'j'k'u'cu'gu'gu'o gp'v'cu'f g'v'k'k'g'f 'kp'Ugevkqp'508." f'k'f "p'q'v'r'q'x'k'f'g'cf f k'k'q'pc'n'r g't'v'p'p'v'f g'v'c'k'i'q'h'j' kvqtkecn'f'uk'g'w'uci'g'0"
Site Observations:	K'p'f'lec'v'k'p'u"qh'j' kvqtke" w'ugu"qh'vj g'Rtqr gtv' "qt"cf l'q'k'k'k'pi "r'q'r'g't'v'k'u"y g't'g'p'q'v'q'd'ug't'x'g'f " f'w't'k'pi "vj g'uk'g't'geq'p'p'c'k'u'c'p'eg'0"
Other Sources:	P q'cf f k'k'q'pc'n'r g't'v'p'p'v'j kvqtkecn'f c'v'y cu'q'd'v'k'p'g'f 0'

4.2.8 Summary of Identified Historic Uses

Vj g'h'q'm'y kpi "cd'rg'r' t'g'ug'p'w'c'lw'o o ct { 'qh'vj g'v'f' r'g'u'c'p'f "cr r tqz'k'o cv'g'f'cv'g't'c'p'i gu'q'h'k'f gp'w'k'k'f 'r' t'k'q't' w'ugu"qh'vj g'Rtqr gtv' <"

Property	
Date Range	Use
3: ; 7"q'3; 84"	K'p'f'w'ut'kecn'k'penw'f'k'pi "Uj g'm'i'Q'k'i'Y'c't'g'j'q'w'ug."H'w'k'w'R'cen'k'pi "Y'c't'g'j'q'w'ug."c'p'f "H'gg'f"Y'c't'g'j'q'w'ug'0'U'g'x'g't'c'i'l' t'g'ul'f'g'p'eg'u'c'm'q'r' t'g'ug'p'0'T'c'k't'q'c'f' 't'w'p'u'vj' t'q'w'i'j' "Rtqr gtv'0'
3; 87"q'4234"	K'p'f'w'ut'kecn'k'penw'f'k'pi "T'k'x'g't'ul'f'g'U'eter' 'O'g'v'c'i'0'T'c'k't'q'c'f' 't'w'p'u'vj' t'q'w'i'j' "Rtqr gtv'0'
4238"q'Rt'g'ug'p'v'	X'c'c'ep'v'

"

Vj g" hqmy kpi "vcdng" r tguwpv" c" uwo o ct { "qh" vj g" v" r gu" qh" kf gpvkhf " r tkt" wugu" qh" vj g" cf lqkpi " r tqr gt vku" <

"

Adjoining Properties	
Date Range	Use
3: : 7"vq" Rt guwpv"	T gukf gpvkn" vj g" gcuv" lpf wutkn" vj g" pqt vj . "uqwj . "cpf" y guv"

"

4.2.9 Historical Records Data Failure

"

Vj g" CUVO "G3749/35" ucpf ctf " f ghkpgu" f cvc " hknwt g" cu" c" hknwt g" vq" cej kxg" vj g" CUVO " ur gekkhgf " j kvqtkecn" tgugetej " qdlgev kxgu" chgt " t gxlgy kpi " vj g" ucpf ctf " j kvqtkecn" uqwt egu" vj cv" ct g" tgcuaqpcdnf " cuegt vclpcdnf" cpf " rkngnf " vq" dg" wughw" Vj g" qdlgev kxg" ku" vq" kf gpvkhf " cm" qdxkqu" wugu" qh" vj g" r tqr gt v" " htqo " vj g" r tguwpv" dcm" vq" vj g" r tqr gt v" u" hktuv" f gxgnr gf " wug" .qt" dcm" vq" 3; 62. " y j lej gxgt " ku" gct rkt 0" Hwt vj gto qtg. " tgeqtf u" qh" j kvqtke " wugleqpf kkpqu" uj qwf " dg" uqwi j v" kp" kvgt xcu" pq" rguu" vj cp" cr r tqzko cvgnf " hkg" { gctu. " wprguu" vj g" r tqr gt v" " eqpf kkpqu" cr r gct " vpej cpi gf " qxgt " c" hpi gt " kvgt xcu" " "

Objective	Met?	Detail	Significant?
Hktuv" f gxgnr gf " wuglf cvg" f gvtgto kpgf A'	[gu"	Vj g" hktuv" f gxgnr gf " wug" qh" vj g" Rtqr gt v" y cu" c" hggf " cpf " hwnly ctgj qwug" dwn" ektec" 3: ; 70'	P C"
Tgeqtf " uqwt egu" cv7/ { gct" kvgt xcu" dcm" vq" 3; 62" qt" hktuv" f gxgnr gf " wugA'	P q"	J kvqtkecn" tgeqtf " i cr u" gzeqgf kpi " hkg" { gctu" y gtg" gpeqwpvgt gf 0/ J qy gxgt. " uki phtecp" v" ukv/ wug" ej cpi gu" qt" wpf kvqxt gf " ukv" wugu" cr r gct " wprknf " vq" j cxg" qeewt gf " f wtkpi " vj g" tgeqtf " i cr u" 0'	P q"
Cm" qdxkqu" r tkt " wugu" kf gpvkhf A'	[gu"	Ugg" Ugekvq" 6040 0'	P C"

"

Rngcug" tghgt " vq" Ugekvq" 405" hqt" cf f kkpncn" f kvewukq" qh" f cvc" i cr u" cpf " vj gk" uki phtecpeg" vq" vj g" hkp kpi u" qh" vj g" cuuguo gpv0'

"

4.2.10 Historic Uses REC Discussion

"

Vj g" t gxlgy " qh" j kvqtkecn" tgeqtf u" lpf kecvgf " gxkf gpeg" qh" vj g" hqmy kpi " r qvwpkn" TGEu" kp" eqppgekvq" y kj " vj g" Rtqr gt v" <

"

Vj g" Rtqr gt v" " cr r gctu" vq" j cxg" dggp" wknf gf " rcti gnf " y kj " xctkqu" lpf wutkn" wugu" y j lej " kpenf g" c" ueter " o gvnf ge { engt" cpf " c" Uj gm" Qkn" Y ctgj qwug" y kj " xctkqu" r gvtqrgwo " uqtci g" vcpnu" 0F wv" vq" vj g" ci g" cpf " f wcvkq" qh" vj g" vq" lpf wutkn" wugu" .cpf " vj g" eqpwo kpcvq" kf gpvkhf " d { " r t gxlqu" Rj" cug" KK y qtm" vj g" j kvqtke " wuci g" qh" vj g" Rtqr gt v" " ku" eqpukf gtgf " vq" dg" c" TGE 0"

4.3 Standard Environmental Record Sources

"

C" tgi wvqt { " f cvdcug" tgr qtv. " kvrgf " GF T" Tcf kwu" O cr I " Tgr qtv. " r tgr ctgf " d { " Gpxkqpo gpvcn" F cvc" Tguqwt egu" qh" Uj gnap. " EV" y cu" qdvc kpgf " cpf " t gxlgy gf 0/ Vj g" tgr qtv" r tqxkf gf " c" ugctej " qh" ucpf ctf " gpvkhf gpvcn" tgeqtf " uqwt egu" hqt" rku kpi u" qh" vj g" Rtqr gt v" . " cf lqkpi " r tqr gt vku" cpf " ukv" y kj kp" vj g" uwtqwpf kpi " ctgc= " cpf " j cu" dggp" t gxlgy gf " hqt" vj g" r wtr qug" qh" kf gpvkhf kpi " rku kpi u" uwi i gukpi " c" r qvwpkn" ko r cev" vq" vj g" Rtqr gt v" " f wv" vq" r t gugpeg" qt" o ki tvkq" qh" j c| ctf qwu" uxdvcpegu" cpf lqt" r gvtqrgwo " r tqf wvu" 0' Cf f kkpncn" f guetk vku" qh" vj g" o gcpkpi " cpf " uki phtecpeg" qh" vj g" tgi wvqt { " f cvdcugu" ecp" dg" hqwpf " kp" vj g" tgi wvqt { " f cvdcug" tgr qtv" kp" Cr r gpf kz " G0" Vj g" GF T" Tcf kwu" O cr I " "

Tgr qtv'r tqxkf gf 'c'ugetej 'qh'vj g'hqmqy kpi 'f cvdcug'ecvgi qtkgu'kp'ceeqtfcpeg'y kj 'vj g'tgs wktgo gpw' qh'vj g'CUVO 'Ucpcf ctf 'G3749/35<

Regulatory Database	Search Distance
Hgf 0P cvkqpcn'Rt kqt kkgu'Nkuv*P RNlc0n0Uwr gthwpf ö'ukgu+'('Rtqr qugf 'P RN'""	3/o krg"
Hgf 0F grkugf 'P RN'	/o krg"
Hgf 0Uwr gthwpf 'Gpvt r tkug'O cpci go gpv'U{ uvgo *'UGO U=hqto gtn' 'EGTENKU+'	/o krg"
Hgf 0UGO U'CTEJ KKG*'hqto gtn' 'hpqy p'cu'EGTENKU'P HTCR+'	/o krg"
Hgf 0TETC 'Eqtt gevkg'Ce vkq'Ukgu*'EQTTCCE VU+'"	3/o krg"
Hgf 0TETC 'Vtcur qtv'Uqtci g'IF kur qucn*'VUF +'ukgu"	/o krg"
Hgf 0TETC 'I gpgtcvtu*'NSI . 'UI S '('EGUSI +'	Ukg'('Cf lqkpi "
Hgf 0Kpukwvkqpcn'Eqvt qn'Gpi kpggtkpi 'Eqvt qn*'KE IGE+'T gi kwtkgu"	Ukg'qpn' "
Hgf 0Go gi gpe { 'T gur qpug'P qv'hec vkq'U{ uvgo *'GTP U+'	Ukg'qpn' "
Ucvg IVtkden'J c ctf qwu'Y cug'Ukgu*'U Y U+'	3/o krg"
Ucvg IVtkden'Ncpf hkn'cpf lqt'Uqrf 'Y cug'F kur qucn*'NHUY H+'	/o krg"
Ucvg IVtkden'Ngenkpi 'Uqtci g'Ve pmu'""	/o krg"
Ucvg IVtkden'T gi kvgt gf 'Uqtci g'Ve pmu'""	Ukg'('Cf lqkpi "
Ucvg IVtkden'KE IGE 'T gi kwtkgu'""	Ukg'""
Ucvg IVtkden'Xqnpwct { 'Ergepwr 'Ukgu'""	/o krg"
Ucvg IVtkden'Dt qy phgrf u'""	/o krg"
Cf f kkpqpcn'Hgf gtcn 'Ucvg. 'Vtkden'cpf 'Nqecni'Gpxkt qpo gpvcn'F cvdcugu'""	Xctkcdrg"

Tgr qtv'gf 'f kucpegu'hq'cf lqkpi 'rkukpi u'f kucwugf 'kp'Uge vkq'606. 'kh'cr r ncedrg. 'ctg'cr r tqzko cvg' cpf 'kpf kec vkg'qh'vj g'r tgupeg'qh'c'r wdrk'tqcf y c { 'qt'tki j vqh/y c { 'dgwy ggp'yj g'cf lqkpi 'ukg'cpf ' Rtqr gt v{ 0' "

Vj g'tgr qtv'gf 'i tcf kgpv'kpf kecvf 'y j gt g'cr r ncedrg'kp'Uge vkqu'606'cpf '607'j cxg'dggp'guko cvg' " dcugf 'qp'c'pwo dgt'qh'hecvtu'kpenf kpi 'dw'pqv'pgeguactk' 'hko kcf 'vq'hgrf 'qdugtxcvkq. 'tgxky 'qh' vqr qi ter j ke'bo cr u. 'f cvdcug'rkukpi 'f gvcku'cpf lqt 'ukg'ur gekke'i gq/vgej plecnf cv0' "

4.3.1 Supplemental Database Listings

Vj g'tgi wcvqt { 'f cvdcug'tgr qtv'y cu'cnuq'tgxky gf 'hq'trkukpi u'qp'uw r ngo gpvcn'f cvdcugu. 'kp'cf f kkpq' vq'vj g'Ucpcf ctf 'Gpxkt qpo gpvcn'T geqt f 'Uqwtegu0Cp { 'r tqr gt v { 'qt'cf lqkpi 'r tqr gt v { 'rkukpi u'qp'uwej ' f cvdcugu'qh'uki p'k'kecpv'epegtp. 'kh'kf gpv'k'gf. 'ku'f kucwugf 'kp'Uge vkqu'606'cpf '606'Qvj gty kug.' pqp'g'qh'vj g'q'vj gt'uw r ngo gpvcn'f cvdcug'rkukpi u'kf gpv'k'gf 'd { 'vj g'tgi wcvqt { 'f cvdcug'tgr qtv'ctg' eqpukf gt gf 'vq'dg'c'TGE 'kp'eqppgevkq'y kj 'vj g'Rtqr gt v { 0' "

4.3.2 Limited Tier I Vapor Encroachment Screening

Nko kcf 'cpcn' uku'qh'vj g'f gvcku'qh'qp/ukg.'cf lqkpi 'cpf 'xlekp'v'f cvdcug'ukgu'y cu'eqpf wevgf 'vq' kf gpv'k'gf 'r qv'p'v'cn'uqwtegu'qh'uwd/uw'hc'eg'xcr qt 'gpetqcej o gpv'0Vj ku'tgxky 'y cu'dcugf 'qp'grgo gpw' qh'vj g'CUVO 'öUcpcf ctf 'I w'kf g'hq't'Xcr qt 'Gpetqcej o gpv'Uetggp'kpi 'qp'Rtqr gt v { 'kpxqrgf 'kp'T gcn' Gucv'g'Vtcpu'cvkqpuö*'CUVO 'G'4822/37'="cpf 'cnuq'qp'grgo gpw'qh'öO gj qf qm { 'hq't'K gpv'k'gf kpi ' yj g'ctgc'qh'Epegtp'ctqwpf 'c'Rtqr gt v { 'Rq'v'p'v'cm' 'k' r cevgf 'd { 'Xcr qt 'O ki tv'kq'p'htqo 'P gctd { ' Eqpwo kpcv'f 'Uqwteguö*'Dv'p'leqtg.'4233/U/325/CY O C +0'Xlekp'v'f cvdcug'ukgu'r gv'ck'kpi 'vq' pqp/r gt qrgwo 'r tqf wev'tgrgcugu'y kj kp'3.982'hggv'qh'vj g'Rtqr gt v { 'kp'vj g'wr /i tcf kgp'v'f k'gevkq. '587' "

"

hggv'qh'v'j g'Rtqr gtv'f 'kp'v'j g'etquu'i tcf kgpv'f k'gevkp'cpf '322'hggv'qh'v'j g'Rtqr gtv'f 'kp'v'j g'f'qy p'i tcf kgpv'f k'gevkp'cpf 'xlekp'v'f f'cvdcug'ukgu'r gt'v'k'p'v'j 'v'q'r g'tqngwo 'r tqf wevt'grgcugu'y kj kp'74: 'hggv'qh'v'j g' Rtqr gtv'f 'kp'v'j g'w' /i tcf kgpv'f k'gevkp'. '387'hggv'qh'v'j g'Rtqr gtv'f 'kp'v'j g'etquu'i tcf kgpv'f k'gevkp'cpf " 322" hggv' qh' v'j g' Rtqr gtv'f " kp' v'j g' f'qy p' i tcf kgpv' f k'gevkp' y g'tg' t'g'x'k'g'y g'f " v'q" k'f g'p'v'k'h'f " ce'v'k'g' eqp'v'co k'p'c'v'k'p'uk'gu'y kj 'v'j g'r q'v'g'p'v'k'n'v'q'c'h'g'e'v'u'd'u'w'w'h'c'e'g'x'c'r q't'eq'p'f k'k'q'p'u'c'v'v'j g'u'd'l'g'e'v'r t'q'r g'tv'f 0' V'j g'r q'v'g'p'v'k'n'h'q't'x'c'r q't'g'p'e't'q'c'e'j o g'p'v'y c'u'eq'p'k'f g't'g'f 'kp'c'u'g'u'k'p'i 'y j g'y g't'q't'p'q'v'c'T'G'E'g'z'k'u'u'k'p' eq'p'p'g'e'v'k'p'y kj 'v'j g'Rtqr gtv'f 'y j g'p't'g'x'k'g'y k'p'i 'c'r r'k'e'c'd'r'g'uk'gu'y kj kp'v'j q'u'g'f'k'u'c'p'e'g'u'0"

"

T'g'i w'r'v'q't'f "f'c'v'd'c'g'uk'gu'y kj "c'e'v'k'g'r g't'q'ng'wo "q't'p'q'p'/r g't'q'ng'wo "t'g'g'c'g'u'g'y c'v'c't'g'eq'p'k'f g't'g'f "v'q" eq'p'k'w'w'g'c" x'c'r q't'g'p'e't'q'c'e'j o g'p'v' eq'p'f k'k'q'p' *X'G'E'+ "v'q" v'j g' Rtqr gtv'f . "k'h'c'p'f . "c't'g'k'f g'p'v'k'h'g'f " c'p'f " f'k'u'e'w'u'g'f 'k'p'U'g'e'v'k'p'u'6'6'6'. '6'6'6'c'p'f '6'6'6'0"

"

4.3.3 Property Listings

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V'j g'h'q'm'y k'p'i 'r'k'u'k'p'i u'q'h'v'j g'Rtqr gtv'f 'y g't'g'k'f g'p'v'k'h'g'f <"

"

V'j g'o c'k'p'd'w'k'p'g'u'u'c'v'v'j g'Rtqr gtv'f "u'd'l'g'e'v'v'q'v'j k'u'k'p'x'g'u'k'i c'v'k'p'k'u'T'k'x'g't'u'k'f g'U'e't'e'r "K'q'p'c'p'f "O'g'v'e'n' E'q't'r q't'e'v'k'p'c'p'f "e'q'x'g't'u'c'm'v'j g'r c't'e'g'n'i'q'h'k'p'v'g't'g'u'0'0 w'm'k' r'g'c'f'f' t'g'u'g'u'c't'g'k'u'g'f "e'q'p'e'w't'g'p'v'k'f "q'p'v'j g' W'U'D't'q'y p'h'k'g'f u'c'p'f "H'K'F'U'f'c'v'd'c'g'u'0'D'g'ny 'k'u'c'u'w'o o c't'f' "q'h'v'j g'r g't'v'k'p'g'p'v'f g'v'k'u'g'z'v'c'e'v'g'f "t'q'o " v'j g'h'k'u'k'p'i u'c'p'f "e'q'p'f g'p'u'g'f "k'p'v'q'q'p'g'ec'v'g'i q't'f' <"

"

Name/Address:	522: /5254'8'v'j 'U't'g'g'v'1'522: '7'v'j 'U't'g'g'v'1'8'v'j 'c'p'f 'E'q'o o g't'eg'U't'g'g'v'1'6'v'j 'c'p'f 'E'q'o o g't'eg'U't'g'g'v'1'4: ; 5'9'v'j 'U't'g'g'v'
Database(s):	H'K'F'U'.'D'T'Q'Y'P'H'K'G'N'F'U'
Data Discussion:	U'g'x'g'p'9+'W'U'D't'q'y p'h'k'g'f u'c't'g'f' g'u'e't'k'd'g'f 'c'v'v'j g'Rtqr gtv'f "q'x'g't'x'c't'k'q'w'c'f'f' t'g'u'g'u'c'p'f "c'u'u'q'e'k'c'v'g'f " y k'j "T'k'x'g't'u'k'f g'U'e't'e'r "K'q'p'c'p'f "O'g'v'e'n'E'q't'r q't'e'v'k'p'0'P'p'q'g'q'h'v'j g'h'k'u'k'p'i u'r' t'q'x'k'f g'f' g'v'k'u'c'c'd'q'w'v'j g' v'f' r'g'u'q'h'eq'p'v'co k'p'c'p'u't'g'r q't'v'g'f 'c'v'v'j g'Rtqr gtv'f 0'V'j g'C'E'T'G'U'Rtqr gtv'f "K'F' a'v'c't'g'<37; ; 2.'37; 9; 0' 37; ; 7.'37; ; 5.'37; ; 6.'c'p'f "37; ; 4" t'g'u'r g'e'v'k'g'n'f 0'V'j g'H'K'F'U'f'c'v'd'c'g'u' r'k'u'k'p'i u'r' t'q'x'k'f'g' v'j g' h'q'm'y k'p'i "T'g'i k'u'k'f'f' "K'F' "a'c'<33225: 8; 5828.'33225: 8; 57; ; . '33225: 8; 5873.'33225: 8; 5855." c'p'f "33225: 8; 5864'k'p'q't'f'g't'q'h'v'j g'c'd'q'x'g'k'u'g'f'c'f'f' t'g'u'g'u'0"
REC Discussion:	D'c'u'g'f'q'p'v'j g'f' g'v'k'u'r' t'q'x'k'f'g'f' c'd'q'x'g.'c' 'T'G'E'k'p'eq'p'p'g'e'v'k'p'y k'j 'v'j g'Rtqr gtv'f 'j c'u'd'g'g'p'k'f'g'p'v'k'h'g'f'0'
VEC Discussion:	D'c'u'g'f'q'p'v'j g'c'x'c'k'c'd'g'f'c'v'c.'c' 'X'G'E'g'z'k'u'u'0'

"

Name/Address:	T'k'x'g't'u'k'f g'U'e't'e'r "K'q'p'c'p'f "O'g'v'e'n'E'q't'r q't'e'v'k'p'"1'4: ; 5'8'v'j 'U't'g'g'v'5'2'5'5'7'v'j 'U't'g'g'v'4: ; 4'7'v'j 'U't'g'g'v'
Database(s):	U'Y'G'G'R'U'.'W'U'V'."E'c'."H'K'F'."W'U'V'."J'K'U'V'."W'U'V'."N'W'U'V'."E'J'."O'K'F'U'."N'W'U'V'."U'N'K'E'."Y'F'U'."E'K'Y'."S'U'."C'U'V'."J'Y'V'U'."J'C'."P'G'V'."G'p'x't'q'u'q't'."X'ER"
Data Discussion:	V'j g'U'Y'G'G'R'U'.'W'U'V'.'r'k'u'k'p'i 'k'p'f'k'e'c'v'g'u'h'q'w't'w'p'f'g't'i' t'q'w'p'f' 'v'c'p'm'i'c'v'v'j g'Rtqr gtv'f 0'H'q'w't'6+'v'c'p'm'i'c't'g'g' r'k'u'g'f'c'u'6'c'e'v'k'g'o'y k'j "c'p'c'e'v'k'g'f'c'v'g'c'u'33/3: /3; ; 40'Q'p'g'v'c'p'm'k'u'.'. .222/i c'm'p'u'c'p'f "u'q't'g'u'f'k'g'u'g'n' c'p'f "v'j g'v'j t'g'g'q'v'j g't'v'c'p'm'i'c't'g'322/i c'm'p'u'y k'j "w'p'n'p'q'y p'eq'p'v'g'p'u'0'V'j g'EC'."H'K'F'."W'U'V'.'r'k'u'k'p'i " k'p'f'k'e'c'v'g'u'c'w'c'w'u'q'h'6'c'e'v'k'g'0'."T'k'x'g't'u'k'f g'U'e't'e'r "K'q'p'(" "O'g'v'e'n'5'2'5'5'7'v'j "U'0'V'j g'J'k'u'q't'l'e'."W'U'V' r'k'u'k'p'i "f'g'u'e't'k'd'g'u'c'p'f' . .222/i c'm'p'f'k'g'u'g'n'v'c'p'm'i'y k'j "c'v'q'c'n'q'h'v'j t'g'g'5+'v'c'p'm'i'y g't'g'h'q't'o g't'n' " u'f' u'g'o 0'V'j g'g'e'g'q'p'f "J'k'u'q't'l'e'."W'U'V'.'r'k'u'k'p'i "k'p'f'k'e'c'v'g'u'c'v'q'c'n'q'h'v'j t'g'g'5+'v'c'p'm'i'y g't'g'h'q't'o g't'n' " t'g'i k'u'g't'g'f "v'q'v'j g'o g'v'e'n'u'e't'e'r "r' t'q'g'e'u'q't'0'V'j g'v'c'p'n'i'u'f' u'g'o "k'p'e'n'f'g'u'c'772/i c'm'p'f'g'i w'r'c't'f' t'q'f' w'e'v' v'c'p'n'f'c'p'f "y q'8+'w'p'n'p'q'y p'u'k'g'c'p'f "eq'p'v'g'p'v'w'p'f'g't'i' t'q'w'p'f' 'v'c'p'm'u'0'V'j g'h'k'u'k'p'i "r' t'q'x'k'f'g'u'c'f'k'e'k'k'v'f " K'F' "86: +'c'p'f "c' "r'e'v'k'w'f'g'h'q'p'i k'w'f'g' "d'w'p'q' "c'f'f'k'k'q'p'c'n'i'r'g't'v'k'p'g'p'v'f'g'v'k'u'0'V'j g'N'W'U'V'.'r'k'u'k'p'i " k'f'g'p'v'k'h'g'u'v'j g'ec'ug'v'f' r'g'c'u' "o'u'q'l'n'q'p'n'f' "o'c'p'f "v'j g'w'c'w'u'c'u' "o'E'm'g'f'k'e'v'k'p' "eq'o r'ng'v'f'0'V'j g' E'J'."O'K'F'U'.'r'k'u'k'p'i "f'g'u'e't'k'd'g'u'c'ur'k'n'q'h'4/i c'm'p'u'q'h'j'f'f' t'q'ej'q't'l'e'c'ek'f' "q'p'v'q'v'j g't'q'c'f'y c'f' "y j'k'ej' " ec'w'u'g'f'c'x'c'r q't'eq'w'f'0'V'j g'k'p'k'f'g'p'v'f'c'v'g'k'u'k'g'r q't'v'g'f'c'u'7'16'4'222'c'p'f'v'j g'k'p'k'f'g'p'v'v'j c'u'eq'p'v'c'k'p'g'f' d'f' "v'j g' "T'k'x'g't'u'k'f g' "E'k'f' "H'k'g' "F'g'r'c't'v'o g'p'0'c'f'f'k'k'q'p'c'm'f'."v'j g' "r'k'u'k'p'i "f'g'u'e't'k'd'g'u'v'j t'g'g'52/i c'm'p'p' eq'p'v'c'k'p'g't'u'q'h'z'f' {r'p'g'f'c'd'c'p'f'p'q'g'f'c'p'f' "p'q'v'h'g'e'n'k'p'i 'c'v'v'j g'c'f'f' t'g'u'i'q'p'7'15'4'222'0'V'j g'f'c'v'g'eq'o r'ng'v'f' " k'u'0'p'q'v't'g'r q't'v'g'f' "o'h'q't'v'j g'g'e'g'q'p'f' "E'J'."O'K'F'U'.'k'p'k'f'g'p'0'V'j g'g'e'g'q'p'f' "N'W'U'V'.'r'k'u'k'p'i "k'p'f'k'e'c'v'g'u'c'w'c'w'u' "o'E'q'o r'ng'v'f' "o' "E'c'ug' "E'm'g'f' "o'c'u'q'h'32'125'4'222'0'f' c'u'q'k'p'g'k'u'k'k'g'f'c'u'c'r'q'v'g'p'v'k'n'eq'p'v'co k'p'c'p'v'q'h'f' "

"

	<p>eqpegtp"chgevpki "uqk0Vj g'rkvki "cnuq'ur gekkfg "y cv'O VDG'y cu'pqv'vgugf 0Vj g'UNKE'rkvki " kpf lecvgu'c'heekkv' 'ucwu'qh'0Qr gp'6'Cuuguo gpv' ('Kpvtko "Tgo gf kciCevkqp'0'cu'qh'24 49 42360 Rqvgpvkri'eqpvco kpcpv'qh'eqpegtp'ctg'rkvki "cu'REG."REDu."Ctugple."Ngcf."RCJ u."cpf "VRJ 0' Vj g'P RF GU'rkvki "f guetkdu'v'j cv'Tkxgtukf g'Ueter "Kqp' ("O gvcn'cp'kpf wv'kci'heekkv' "qr gtcvfg " w "wpvki'2; 123 4237"y kj "c'uetcr "o gvcn'r gto k'f'kuj cti kpi "kpv'j g'o wplek cr'uqto "y cvgt " u' ugo 0Vj g'Y F U'rkvki "f guetkdu'v'j g'Tkxgtukf g'Ueter "Kqp' ("O gvcn'dw'kpv'guu'cu'c'Ecvgi qt { "E' heekkv' "j cv'f'qgu'pqv'wv'k' g'c'y cvg'vtgco gpv'u' ugo 0Vj g'heekkv' "j cu'c'o kpat "j tgc'v'q'y cvgt " s wv'k' 0Vj g'heekkv' "j cu'c'r gto k'f'ht "c'4.222/i cmpp'cdq'xg/i tqv'p' "vcpn'0P "c'f'f'k'k'p'cn'f' g'v'k'cu' ctg'r tqxkf gf 0Vj g'J Y VU'rkvki "kpf lecvgu'j cv'j g'ukg'ku'qp'j g'J c' ctf qwu'Y cvg'Vtcentki " U' ugo 0Vj g'J C \ P GV'rkvki u'kpf lecvgu'j cv'xctk'qwu'j c' ctf qwu'o cvgt'kcu'j cvg'dggp'f' g'p'g'cvfg " cpf " f'kur'qugf " qh' htqo " j g' Rtqr g'v'f' 0' Vj g' Gpxk'quv'qt " kpf lecvgu' cp " 0' Cevkxg'o' ucwu' cu' qh' 26 47 42380' Vj g' uksg' v' r g' ku' p'q'v'f " cu' x'q'np'v'ct { " erc'p'w' 0' J kmo c'pp' " t'g'x'k'y gf " f'q'ewo' g'p'u' c'x'c'k'c'd'ng'q'p'G'p'x'k'q'v'q' " j' k'j " k'p'f' l'ec'v'f' " j' cv'c' " h'k'p'c'n' T'C'R' " j' c'f' " d'g'g'p' " u'v'd'o' k'v'g'f' " c'p'f' " c'r' r' t'q'x'g'f' . " j' q'y' g'x'g't. " J kmo c'pp' " c'nuq' " p'q'v'f' " r'g'w'g'u' " k'p'f' l'ec'v'ki " j' g' v'g'to' k'p'c'v'k'p' " q'h' " j' g' " x'q'np'v'ct { " erc'p'w' " c'i' t'g'g'o' g'p'v'f' w'g' " v'q' " j' g' " e'w't'g'p'v' " q'y' p'g't'au' " c'r' r' c't'g'p'v' " w'p'y' k'v'k'p'i' p'g'u' " v'q' " e'q'o' r' r'g'v'g' " j' g' " T'C'R'0' Vj g' " E'K'Y' S' U'rkvki " k'p'f' l'ec'v'gu'j cv'j g' Rtqr g'v'f' " ku'q'p' " j' g' " E'c'r'i'k'q't'p'l'e' " k'p'v'i' t'c'v'f' " Y' c'v'g't' " S' w'v'k'v' " U' u'g'o' " f' c'v'c'd'c'ug' " y' k'j " p'q' " q'v'j' g't' " r' g't' v'k'p'g'p'v'k'p'h'q't'o' c'v'k'q'p'0' "</p>
REC Discussion:	Dcugf "qp"j g'f'g'v'k'cu'f' tqxkf gf "cdq'xg."c"J TGE "k'p' e'q'p'p'g'v'k'p' " y' k'j " j' g' Rtqr g'v'f' " j' cu' d'ggp' " k'f' g'p'v'k'k'f' 0' "
VEC Discussion:	Dcugf "qp"j g'c'x'c'k'c'd'ng' " f' c'v'c' " c' " XGE " k'u'p'q'v'w'ur' g'ev'g'f' 0' "

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Name/Address:	Kp'v'p'f' H'co g'cpf "F guki p"157; 8'E'q'o o g'teg"Ut ggv'
Database(s):	NWUV."J KUV'EQT'VGUG."NWUV"
Data Discussion:	Vy q'NWUV'rkvki u'ht "j' g' u'co g'ecug'p'wo dgt "y g'tg'k'p'f' l'ec'v'f' "y k'j "c'ucwu'qh'0'E'q'o r' r'g'v'f' "0' " Ecug'Er'nu'g'f' 0'cu'qh'29 B9 B; ; 70Vj g'r' q'v'p'v'k'ri'eqpvco kpcpv'qh'eqpegt'p'ku'f' g'p'v'k'k'f' "cu'f' cu'q'k'p'g' " r' q'v'p'v'k'ri'eqpvco " chgevpki " uqk0' C " P q " H'v'j' g't " Cevkqp " Ngwgt " *%0'EF GJ 2939-" y cu' ku'v'g'f' " qp " 29 B9 B; ; 7'c'v'g't' "t'g'o' g'f' k'v'k'p' "r' t'q'eg'u'g'u' "q'h' "g'z'ec'x'c'v'k'p' "c'p'f' "u'q'k'i'x'c'r' q't' "g'z'v'c'v'k'p' " *UXG+"u' u'g'o' " y g'tg' "o' r' i'g'o' g'p'v'f' 0'Vj g'J KUV'EQT'VGUG'rkvki "r' tqxkf gu'c't'g'i' w'v'v'q't' { "K" "2: 552455; V+"dw' " p'q' "c'f'f' k'k'p'c'n'r' g't' v'k'p'g'p'v'k'p'h'q't'o' c'v'k'q'p'0'Vj g'g'ue'q'p'f' "NWUV'rkvki "f' guetkdu'v'j g' u'co g'ecug' "f' "q'd'c'n' "K" " %0'2828722562+" c'p'f' " c'f'f' u' " c' " r'g'c'n' c'p'f' " O VDG " y cu' " f' g'v'g'v'f' " f' w'k'p'i' " c' " v'c'p'n' e'nu'w'g' " qp " 94; B; ; 50C "x'c'r' q't' "g'z'v'c'v'k'p' "o' g'y' q'f' "y' cu'w'v'k'k'f' g'f' "v'q' "c'd'c'v'g' "j' g' "e'q'p'v'co' k'p'c'v'k'p'0' "
REC Discussion:	Dcugf "qp"j g'f'g'v'k'cu'f' r' tqxkf gf "cdq'xg."c"J TGE "k'p' e'q'p'p'g'v'k'p' " y' k'j " j' g' Rtqr g'v'f' " j' cu' d'ggp' " k'f' g'p'v'k'k'f' 0' "
VEC Discussion:	Dcugf "qp"j g'c'x'c'k'c'd'ng' " f' c'v'c' " c' " XGE " k'u'p'q'v'w'ur' g'ev'g'f' 0' "

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4.3.4 Adjoining Property Listings

"

Vj g'h'q'm'y kpi "cf l'q'k'p'k'p'i "r' t'q'r' g't'v'f' "h'v'k'p'i u'y' g't'g'k'f' g'p'v'k'k'f' 0T g'r' q't'v'f' "f' k'v'c'p'eg'u' "y' j' g't'g'r' r' h'c'c'd'ng' "c't'g' " c'r' r' t'q'z'k'o' c'v'g' "c'p'f' "k'p'f' l'ec'v'k'x'g' "q'h' "j' g' "r' t'g'ug'p'eg' "q'h' "c' "r' w'd'r'k'e' "t'q'c'f' y' c' { "q't' "t'k'i' j' v'q'h' "y' c' { "d'g'y' g'g'p' "j' g' " c'f' l'q'k'p'k'p'i "uksg' "c'p'f' "Rtqr g'v'f' 0'Vj g't'g'r' q't'v'f' "i' t'c'f' k'p'v'j' cu' d'ggp' "g'u'k'o' c'v'g'f' "d'c'ug'f' "q'p' "c' "p'w'o' d'g't' "q'h' h'c'v'q't'u' " k'p'e'n'f' k'p'i "d'w' "p'q'v'p'g'g'eu'c't'k' "n'o' k'v'g'f' "v'q' "h'g'r'f' "q'd'ug't'x'c'v'k'p' "t'g'x'k'y' "q'h' "v'q'r' q'i' t'c'r' j' k'e' "o' c'r' u' "f' c'v'c'd'c'ug' " r'k'v'k'p'i "f' g'v'k'cu' "c'p'f' k't' "uksg' "ur' g'ek'h'e' "i' g'q'v'g'ej' p'k'c'n'f' c'v'c'0' "

"

U'g'x'g't'c'n'c'f' l'q'k'p'k'p'i "uksg' "c't'g' "k'f' g'p'v'k'k'f' "q'p' "j' g' "WU' "D't'q'y' p'h'g'r'f' u'f' c'v'c'd'c'ug' "p'q' "r' g't' v'k'p'g'p'v'k'p'h'q't'o' c'v'k'q'p' "ku' " r' tqxkf gf "d' { "j' g'ug' "r'k'v'k'p'i u'0' "

"

Name/Address:	Y guv'Eq'cu'v'Y k'g' "c'p'f' "U'gg'n' "15342' H'k'v'j' "Ut ggv'				
Database(s):	NWUV."J KUV'EQT'VGUG."NWUV."J KUV'WUV"				
Distance in feet:	42"	Direction:	PPY "	Gradient:	F q'y p'
Data Discussion:	Vj g'3'NWUV'rkvki "k'p'f' l'ec'v'gu' "c' "0'E'q'o' r' r'g'v'f' "0' " Ecug'Er'nu'g'f' 0'uc'wu'cu'qh'25 128 B; ; 200 VDG' " y' cu' "p'q'v't'g's' w'k'g'f' "v'q' "d'g' "v'g'ug'f' "d' { "j' g' "m'q'c'n' "c'i' g'p'e' { 0'Vj g'r' q'v'p'v'k'ri'eqpvco kpcpv'qh'eqpegt'p' "y' cu' " k'f' g'p'v'k'k'f' "cu' "i' cu'q'k'p'g' "y' j' k'j "r' q'v'p'v'k'ri'eqpvco " chgevpki " q'p'n' "u'q'k'i'c'v'j' g' "uksg' 0'Vj g'J KUV'EQT'VGUG' " r'k'v'k'p'i "r' tqxkf gu' "p'q' "r' g't' v'k'p'g'p'v'k'p'h'q't'o' c'v'k'q'p'0'Vj g'4' "r'k'v'k'p'i "k'f' g'p'v'k'k'f' "j' g' "e'c'ug' "v'f' r' g' "cu' "0'U'q'k'i'q'p'n' "0' "				

	cpf "c'hcckk' 'ucwu'qh'equgf lcvkqp'eqo r rvgf "Vj g'J kvqtke" WUV'rkukpi 'kf gpvklgf "y q'hqto gt" wpmi'cv'vj g'uksg."c'4.222/i cmqp'f'kgugn'cpn'icpf "c'3.222/i cmqp'wprgcf gf "cpn0"
REC Discussion:	Dcugf "qp'vj g'f gcku'r tqxkf gf "cdqyg."c'TGE'ku'pqv'uwur gevfg 'kp'eqppgevkp'y kj 'vj g'Rtqr gtv' O'
VEC Discussion:	Dcugf "qp'vj g'cxckrdng'f cvc."c'XGE'ku'pqv'uwur gevfg O'

Name/Address:	P cvkqpen'Qtcepi g'Rcen'pi 'Eq0T'5826'Eqo o gteg'Uv'		
Database(s):	J KUV"WUV."GO K'J KUV"WUV"		
Distance in feet:	94"	Direction:	Y UY "
Gradient:	Etqu"		
Data Discussion:	Qpg'J KUV"WUV'rkukpi 'kf gpvklgf "c'782/i cmqp'cpn'luqt'kpi "cp'wpur gekklgf "r tqf wex0"Vj g'GO K'rkukpi "rkua'y cv'hkxg'vqpu'qh'vqcn'qti cple"j { f tqectdqp'i cugu'cpf "hqw'vqpu'qh'tgcevkxg'qti cple" i cugu'y gtg'go kwgf "cpf "o qpkqt'kpi "d { "vj g'Uqwj 'Eqcu'CS O F "kp'3; : 90'Vj g'q'vj gt"J KUV"WUV'rkukpi "f guetkdg'u'y g'cdqyg'o gpv'kpgf "cpn0"		
REC Discussion:	Dcugf "qp'vj g'f gcku'r tqxkf gf "cdqyg."c'TGE'ku'pqv'uwur gevfg 'kp'eqppgevkp'y kj 'vj g'Rtqr gtv' O'		
VEC Discussion:	Dcugf "qp'vj g'cxckrdng'f cvc."c'XGE'ku'pqv'uwur gevfg O'		

Name/Address:	Vkf gp'Eqki'Eqpux'vexqtu'kpe0T'5682'Eqo o gteg"		
Database(s):	TETC/USI ."HFPFU"		
Distance in feet:	448"	Direction:	PPG"
Gradient:	Etqu"		
Data Discussion:	Vj g'TETC/USI 'rkua'y g'qr gtcvkp'cu'e'lo cni's wcpv'kf 'i gpgtcvqt'y kj 'pq'xkqrvkqpu'hqwpf 0Vj g' HFPFU'f cvdcug'rkua'y g'dwukpguu'qp'vj g'Tguqwtg'Eqpugt'xcvkp'cpf "Tgeqxt { "Cev'r tqi tco " cpf "vj g'WU'GRC'Cuuguo gpv.'Ergcpwr ."cpf "Tgf g'xgrtr o gpv'Gzej cpi g'U'vgo 0"		
REC Discussion:	Dcugf "qp'vj g'f gcku'r tqxkf gf "cdqyg."c'TGE'ku'pqv'uwur gevfg 'kp'eqppgevkp'y kj 'vj g'Rtqr gtv' O'		
VEC Discussion:	Dcugf "qp'vj g'cxckrdng'f cvc."c'XGE'ku'pqv'uwur gevfg O'		

Name/Address:	Rwi gtq'Eqo r cp { "Wpk'37: "T4844'5tf 'Uv'		
Database(s):	TETC/USI ."HFPFU"		
Distance in feet:	448"	Direction:	PPG"
Gradient:	Etqu"		
Data Discussion:	Vj g'TETC/USI 'rkua'y g'qr gtcvkp'cu'e'lo cni's wcpv'kf 'i gpgtcvqt'y kj 'pq'xkqrvkqpu'hqwpf 0Vj g' HFPFU'f cvdcug'rkua'y g'dwukpguu'qp'vj g'Tguqwtg'Eqpugt'xcvkp'cpf "Tgeqxt { "Cev'r tqi tco " cpf "vj g'WU'GRC'Cuuguo gpv.'Ergcpwr ."cpf "Tgf g'xgrtr o gpv'Gzej cpi g'U'vgo 0"		
REC Discussion:	Dcugf "qp'vj g'f gcku'r tqxkf gf "cdqyg."c'TGE'ku'pqv'uwur gevfg 'kp'eqppgevkp'y kj 'vj g'Rtqr gtv' O'		
VEC Discussion:	Dcugf "qp'vj g'cxckrdng'f cvc."c'XGE'ku'pqv'uwur gevfg O'		

Name/Address:	Tlxgtukf g'Hgt'vkl' gt"Y qtnu'T4844'5tf 'Uv'ggv'		
Database(s):	GP XKI'QUVQT.'CUV.'UGO U/Ctej kxg"		
Distance in feet:	448"	Direction:	PPG"
Gradient:	Etqu"		
Data Discussion:	Vj g'rkukpi "kp' lcvgu'c'ucwu'qh'o'k'p'cevkxg'o" P g'gf u'Gxcn'w'k'p'o"cu'qh'25 128 142280'Vj g'uksg'f kf " pqv's wcrkh' "hqt"vj g'P RN0'Rcu'wug'qh'vj g'3058/cetg"r tqr gtv' "cu'tgckn'etgcvfg "c'r qv'p'v'cn'qh' r gtej m'q'c'v'g'eqp'w'c' l'p'cvk'p'c'h'g'ev'k'p' "o'q'vj gt'cpf "u'q'k'i'o' gf kc'00Vj g'CUV'rkukpi "kp' lcv'v'f' r' gto ku' hqt'44.722'v'q'v'ni' cm'p'u'q'h'cdqyg' i' tqwpf 'u'q't'c'i' g'cv'vj g'cf'f't'g'u'w'p'f' gt'vj g'dwukpguu'Y g'v'g't'p' H'cto " U'g't'x'k'g'D't'c'p'ej' 0Vj g'EGTENK'rkukpi "f' g'uet'k'd'g' "vj cv'vj g'uksg'f kf "pqv's wcrkh' "hqt"vj g'P RN'dw' p'c'f'f'k'k'q'p'c'n'r' g't'v'p'g'p'v'f' g'cku'y' g't'g'r' tqxkf gf O'		
REC Discussion:	Dcugf "qp'vj g'f gcku'r tqxkf gf "cdqyg."c'TGE'ku'pqv'uwur gevfg 'kp'eqppgevkp'y kj 'vj g'Rtqr gtv' O'		
VEC Discussion:	Dcugf "qp'vj g'cxckrdng'f cvc."c'XGE'ku'pqv'uwur gevfg O'		

4.3.5 ASTM Search Distance Findings

Vj g'hqmqy kpi 'ku'c'f'kuewukp'qh'pqp/cf lqk'kpi 'uksgu'kf gpv'klgf 'cu'hqecvfg 'y kj kp'vj g'CUVO 'ur gekklgf " ugctej 'f'kucpeg'uwttqwpf kpi 'vj g'Rtqr gtv' O'kp'qt'f'gt'v'q'nggr 'vj ku'f'kuewukp'kphqto cvkxg'cpf "eqpekug." f'kuewukp'u+kulctg'r tqxkf gf "qh'vj g'rkuv'f'uksg'u+hqt'gcej 'f'cvdcug'ecv'gi qt { "vj cv'er r gctu'o quv'rkngn' " v'k'o r cv'vj g'Rtqr gtv' "dcugf "qp'f'kucpeg."ctgc'v'qr qi tcr j { "cpf lqt'tgi wrcvqt { "ucwu'0N'rkukpi u'qh'uksgu"

"

y kj kp " y g" cr r rcedrg" ugctej " f kucpegu" pqv" ur gekhlecml " f kuewuugf " dgmjy " y gtg" tgxky gf " cpf " eqpenmf gf " pqv" vq" dg" TGEu" kp" eqppgevkqp" y kj " y g" Rtqr gtv " qt" XGEu" dcugf " qp" xctkqwu" hcevqtu" kpenmf kpi " f kucpeg." ctgc" vqr qi tcr j {." npqy p" qt" kphgttgf " i tqwpy cvgt" hqy " f kgevkqp" cpf kq" tgi wrcvqt { "uscwu0Nkukpi u" hqt" y g" hqmjy kpi " f cvcdcugu. " h'kf gpvkhgf. " j cxg" dggp" f kuewuugf " cdqxg" kp" Ugevdkpu" 605 " cpf " 606 < Tgi kvgtgf " Uvqtc i g" Vcpm. " Hgf gten" TETC" I gpgtecvqtu. " Hgf gten" cpf " Ucvg" GE IRE. " GTP UOC" eqr { " qh' y g" hwnltgi wrcvqt { " f cvcdcug" tgr qt v. " kpenmf kpi " cxckrdrg" f gvcku" qh' cmhkvgf " ukgu. " ku' kpenmf gf " kp" Cr r gpf kz " GO"

""

Federal NPL		# of sites:	3	Search Distance:	3/o kg
Notable Listing:	Crtmfcv4999'O clp" Utggv"				
Distance in feet:	4.; 43"	Direction:	PPY "	Gradient:	F qy p"
Data Discussion:	Vj g' rnkpi " kpf lecvgu" y cv' y g' uksg" ku' ewtgpv { " qp" y g' Hkpcn" P RNOI tqwpy cvgt" ku' eqpco kpcvgf " ctqwpf " y g' uksg" y kj " j gzcxcrgpv' ej tqo kwo. " y g' eqpco kpcpv' r nwo g' f qgu" pqv' cr r gct" vq" gz vgpf " wpf gt" y g' ewtgpv" Rtqr gtv { 0'				
REC Discussion:	Dcugf " qp" y g' f gvcku' r tqxkf gf " cdqxg. " c" TGE" ku" pqv' uwr gev f " kp" eqppgevkqp" y kj " y g" Rtqr gtv { 0'				
VEC Discussion:	Dcugf " qp" y g' cxckrdrg" f cvc. " c" XGE" ku" pqv' uwr gev f 0'				

"

Federal Delisted NPL		# of sites:	2	Search Distance:	3/o kg
Notable Listing:	P qpg"				
Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	"				
REC Discussion:	"				
VEC Discussion:	"				

"

Federal SEMS		# of sites:	2	Search Distance:	/o kg
Notable Listing:	P qpg"				
Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	"				
REC Discussion:	"				
VEC Discussion:	"				

"

Federal SEMS-ARCHIVE		# of sites:	3	Search Distance:	/o kg
Notable Listing:	Ugg' Ugevdkp" 60500'				
Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	Vj g' UGO U/Ctej kxg' rnkpi " ku' f kuewuugf " kp" Ugevdkp" 60500'				
REC Discussion:	"				
VEC Discussion:	"				

"

"

Federal CORRACTS		# of sites:	2	Search Distance:	3/o kg
Notable Listing:	P qpg"				
Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	"				
REC Discussion:	"				
VEC Discussion:	"				

"

Federal RCRA-TSD		# of sites:	2	Search Distance:	/o kg
Notable Listing:	P qpg"				

"

Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	"				
REC Discussion:	""				
VEC Discussion:	""				

"

State HAZARDOUS WASTE SITE		# of sites:	38	Search Distance:	3/o kg
Notable Listing:	Y gkxpf "cpf "Eqo r cp{ "cv56; 3'Eqo o gteg"				
Distance in feet:	38: "	Direction:	P "	Gradient:	F qy pIetqu"
Data Discussion:	Vj g" rkuipi "kpf kecvgu" cp "kpcexkg" ucvwu" cu" qh" 25 I28 I42280P q "hwt vj gt "r gt vkgpv" lphqto cvkqp "ku" r tqxkf gf 0'				
REC Discussion:	Dcugf "qp" vj g" f gvcku" r tqxkf gf "cdqyg. "c" TGE "ku" pqvuwur gevfg "kp" eqppgevkp" y kj "vj g" Rtqr gt v{ 0'				
VEC Discussion:	Dcugf "qp" vj g" cxckrdrg" f cvc. "c" XGE "ku" pqvuwur gevfg 0'				

"

State SOLID WASTE FACILITY/LANDFILL		# of sites:	2	Search Distance:	/o kg
Notable Listing:	P qpg"				
Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	"				
REC Discussion:	""				
VEC Discussion:	""				

"

State LEAKING STORAGE TANKS		# of sites:	49	Search Distance:	/o kg
Notable Listing:	Mgpai" Cteq" cv'4: 93 "Wpkxgtukf " Cxgpgw"				
Distance in feet:	86: "	Direction:	UUG"	Gradient:	Wt "
Data Discussion:	Vj g" rkuipi "kpf kecvgu" c" ucvwu" qh" oEqo r rvgf "o" Ecug" Emqugf o" cu" qh" 28 I46 I42330' Uqku" cpf " i tqwpf y cvgt. "y gtg" lo r cevgf " y kj "i cuqkpg" cv" vj g" ukog. "j qy gxgt. " qpnf " rko kgf " i tqwpf y cvgt" eqpvo kpcvkp" y cu' qdugt xgf 0'				
REC Discussion:	Dcugf "qp" vj g" f gvcku" r tqxkf gf "cdqyg. "c" TGE "ku" pqvuwur gevfg "kp" eqppgevkp" y kj "vj g" Rtqr gt v{ 0'				
VEC Discussion:	Dcugf "qp" vj g" cxckrdrg" f cvc. "c" XGE "ku" pqvuwur gevfg 0'				

"

State VOLUNTARY CLEANUP SITES		# of sites:	5	Search Distance:	/o kg
Notable Listing:	Uq" EcnfI cuITkxgtukf g" OI R" cv'32' Uv ggvcpf "J qy ctf "				
Distance in feet:	3.4; 5"	Direction:	UUY "	Gradient:	Etqu"
Data Discussion:	Vj g" rkuipi "kpf kecvgu" c" ucvwu" qh" oEgt vkgf " Q(O " o" Ncpf " Wug" Tgultevkpu" Qpnf o" cu" qh" 29 I4; I42350' Uqku" cv' vj g" ukog" y gt g" lo r cevgf " y kj "xctkqu" eqpvo kpcpw" f wg" vj g" j kxqtkle" wuci g" cu" c" o" cpwxcwv" gf "i cu" r rcp0"				
REC Discussion:	Dcugf "qp" vj g" f gvcku" r tqxkf gf "cdqyg. "c" TGE "ku" pqvuwur gevfg "kp" eqppgevkp" y kj "vj g" Rtqr gt v{ 0'				
VEC Discussion:	Dcugf "qp" vj g" cxckrdrg" f cvc. "c" XGE "ku" pqvuwur gevfg 0'				

"

"

State BROWNFIELD SITES		# of sites:	2	Search Distance:	/o kg
Notable Listing:	"				
Distance in feet:	"	Direction:	"	Gradient:	"
Data Discussion:	"				
REC Discussion:	""				
VEC Discussion:	""				

"

"

"

"

UNMAPPED/ORPHAN LIST SITES	
Notable Listings:	J kmo cpp"j cu"enuq"tgxkgy gf "c"kuv"qh"vpo cr r gf "uksu"chf00Qtr j cp"Nkuv"uksu"lpf lecvf "d" " yj g"fcvdcug"tgr qt0Wpo cr r gf "uksu"vj cvly gtgkf gpvklgf "cu"hcni"pi "y kj kp"cp"cr r rncdrg"lr gekhe" ugctej "f kncpeg"qt"y cttcpvpi "f kuewukq"j cxg"gkj gt"dggp"f kuewugf "kp"vj g"r tgegf kpi "vcdrgu"qt" ctg"fgvckgf "dgmj <" " P qpg"

"

4.4 Additional Environmental Record Sources

"

Tgs wguv"j cxg"dggp"ludo kwgf "q"iqecn'b wplek cn'cpf "ucv"ci gpeku'ht"r gtvppvtgeqtf u'r gtvckpki " vq"yj g"Rtqr gtv".r ctvewrctn" "y kj "tgi ctf "vq"r qvppvkn"gpvktqpo gpvcl'eqpegtpu"uwej "cu"r gvtqrgwo " uvqtc"i g"cpm".uvqtc"i g"cpf "wuci g"qh"j c| ctf qwa"lwducpegu"cpf "r gvtqrgwo "r tqf wew."cpf lqt"hpqy p"qt" uwur gev"gf " gpvktqpo gpvcl' eqpwo kpcvqp0" Y j gtg" cr r rncdrg." kvgtpgv" tgugctej " qh" i qxgtpo gpv" gpvktqpo gpvcl'gi wvvt { "fcvdcugu"y cu"enuq"eqpf wev"gf ."cu"y gm'cu"i' gpgtcl'ewtuqt { "kvgtpgv"ugctej " qh"yj g"Rtqr gtv"cf f tguu."ht"lphqto cvkq"lpf lecvxg"qh"i" TGE0Vj g"lqmjy kpi "vcdrg"uwo o ctkt gu"yj g" hpf kpi u"qh"yj g"tgugctej <"

"

Source	Type of Request	Outcome
EC'F VUE" *Gpxktquvt+"	HQK tgs wguv"	C"t gur qpug"y cu'tgeglxgf "r tqxkf kpi "yj g"lqmjy kpi "r gtvppvtgeqtf u<"T gur qpug" kpf lecvf " yj cv" tgeqtf u" y gtg" cxckrdng" qp" yj g" J Y VU" fcvdcug" cpf " yj g" Gpxktquvt"fcvdcug0J kmo cpp"tgxkgy gf "tgeqtf u"qp"yj g"Gpxktquvt"fcvdcug" qp"y qtmleqpf wev"gf "qp"yj g"usk"lupeg"J kmo cpp"rcuv'eqpf wev"gf "y qtm'lp"yj g"usk" lp"42390"
Hktg" Rtgxgpvqp IO ctuj cm'	HQK tgs wguv"	P q"t gur qpug"y cu'tgeglxgf "r tkqt"v"tgr qtv"kuwcepg0"
Dwrf kpi IEqf g" Gphqtego gpv0'	HQK tgs wguv"	C" t gur qpug" y cu" tgeglxgf " r tqxkf kpi " yj g" lqmjy kpi " r gtvppvt" tgeqtf u<" Eqttgur qpf gpeg"dgw ggp"r mppkpi "f gr ctvo gpv'cpf "f gxgnr gt"
Uqwj "Eqcu"Cl" S wcrk"O cpci go gpv" F kvtlev"UECS OF +"	HQK tgs wguv"	C"t gur qpug"y cu'tgeglxgf "r tqxkf kpi "yj g"lqmjy kpi "r gtvppvtgeqtf u<"Tgeqtf u" tgrv"gf "v"go kuukpu"cpf "gs wkr o gpv'ht"Tkxgtukf g"Ueter "O gcnly gtg'tgxkgy gf 0"

"

"

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

Vj g"ukg"tgeppckucpeg"eqpukvgf "qh' xkuwn' cpf lqt" r j { ulecn' qdugtxcvkpu" qh' vj g" Rtqr gtv{ " cpf " ko r tqxgo gpw. "cf lqkpi "r tqr gtvku"cu"xlgy gf "ltqo "vj g" Rtqr gtv{ "dqwpf ctkgu" cpf "vj g" uwtqwpf kpi " ctgc"dcugf "qp" xkuwn' qdugtxcvkpu" ltqo "cf lqkpi "r wdrk" vj qtqwi j hctgu0Dwkrf kpi "gzvgtktu"y gtg" qdugt xgf "cv"i tqwpf "rgxgn" wprguu" qvj gty kug" kpf kecvgf 0'Y j gtg" cr r rkecdrg. "tgr t gugpvcvkxg" ctgcu" qh' dwkrf kpi "kpvgtktu"y gtg" ceeguugf "cpf" qdugt xgf "vq" vj g" gzvgtktu"y g{ "y gtg" o cf g'uchgn{ "ceeguukdrng" y kj " vj g" eqqr gtcvkp" qh' vj g" ukg" gueqt0"

Site Inspection Personnel:	O u0Uj kr c'Uwprk'
Property Escort/Company:	O t0Vqp{ "Vj qo cu" T'Qy pgt' tgr t gugpvcvkxg"
Inspection Date:	Ugr vgo dgt "42."4243"
Weather Conditions:	Uwpp{ ": 2" f gi tggu" H

5.1.1 Significant Inaccessible Areas

Vj g" hqmjy kpi "uki pkhecpv' ctgcu" qh' vj g" Rtqr gtv{ "y gtg" pqv' ceeguugf "cv" vj g' vko g" qh' vj g" ukg" xkukx<

Vj g" kpvgtktu" qh' vj g" utwewtg" cv" 57; 8" Ego o gteg" Utggv' y cu" kpcceeguukdrng" cu" vj g" dwkrf kpi "j cu" dggp" ugcrgf "f wq" vq" utwewtcl' cpf "uchgv{ "eqpegtpu0Ceeqtf kpi "vq" O t0Vj qo cu. "vj g" dwkrf kpi "y cu" c' hqto gt" Uwprkiv' r centi kpi "y ctgj qwug" cpf "j cu" dggp" wqeeer kfg "qxgt" vj g" { gctu0"

J km cpp' qdugt xgf "hqto gt" eqpetgv' r ku" vj cv' y gtg" wugf "cu" uecrgu0C v' vj g' vko g" qh' vj g" cuuguuo gpv' vj g" r ku" y gtg" eqxgtgf "y kj " uvgnr' r vgu0"

5.1.2 Significant Limiting Site Conditions"

P q" uki pkhecpv' rko kpi "ukg" eqpf kkp' y gtg" pqv' g' cv' vj g' vko g" qh' vj g" ukg" tgeppckucpeg0"

5.2 General Site Setting

5.2.1 Site and Vicinity Characteristics

Abutting Roadways:	O clp' Utggv' vq" vj g' pqtj =Gcu' 7" Utggv' vq" vj g' y guv'
Current Property Use:	Xcecpv"
Evidence of Past Property Uses:	P qpg' qdugt xgf 0'
Evidence of Past Adjoining Property Uses:	P qpg' qdugt xgf 0'
Surrounding Area Uses:	T gukf gpvkn' tckly c{ . "xcecpv' rqu. " cpf " kpf wntkcn' ly ctgj qwugu"

5.2.2 Current Adjoining Property Uses

Dir	Street Address	Description
N	55'Gcu'83'''Utggv'	Tgukf gpv'cl'cr ct vo gpv'u'y kj 'utggv'ixgn'tgucwtcpv'
NE	762'Retm'Cxgpwg''	Nqgy u'Tgi gpe{ 'J qvgn'r ctm'kpi 'i ctei g.'tgucwtcpw.'j ckt'ucm'p'(' 'ur c''
E	5: '('62'Gcu'83'''Utggv'	Uqv gd{ 'u'k'p'vgt'p'v'k'p'c'n'T'g'c'n'f. 'tgukf gpv'cl'cl'eqpf qo k'p'kwo u'
S	57/5; 'Gcu'83'''Utggv'	Tgukf gpv'cl'cr ct vo gpv'u'y kj 'utggv'ixgn'leqo o gtekn'qee'w'cpe{ 'k'p'ew'f'k'pi 'c'' p'cl'cl'uc'm'p'c'p'f'ur c''

P q'x'k'w'cl'q'dugt'x'c'v'k'p'u'k'p'f'k'ec'v'k'g'q'h'c'r' q'v'g'p'v'cl'g'p'x'k'q'p'o' g'p'v'cl'eq'p'eg't'p'y' g't'g'p'q'v'g'f' 'q'p'y'j' g'c'f' l'q'k'p'k'pi ' r' t'q'r' g't'v'k'u'0'

5.2.3 Topographic Characteristics

Terrain:	H'c'v'v'q'i' g'p'v'cl' 'u'm'r' k'pi ''
Direction of Downward Slope:	V'q'y' c't'f' u'y'j' g'p'q't'y'j' /p'q't'y'j' y' g'u'v'
On-site Water Bodies:	P'q'p'g'q'dugt'x'g'f''
Other Significant Features:	P'q'p'g'q'dugt'x'g'f''

5.2.4 General Description of Structures

Buildings/# of Floors	V'y' q'l'y' q'u'q't' { 'y' c't'g'j' q'w'u'g.'d'w't'p'v'f'q'y' p'q'h'leg''
Approx. Building Area:	6.722''18.222''13: .372''
Approx. Year Built:	3; 22''
Ancillary Structures:	P'q'p'g'q'dugt'x'g'f''
Sources of Heating & Cooling:	P'c''
Potable Water/Sewage Disposal:	P'q'r' q'v'c'd'g'y' c'v'g't' 'u'g'y' g't' 'u'g't'x'k'eg'u'y' g't'g'r' t'g'u'g'p'v'c'v'y' g'R't'q'r' g't'v'k'u'0'

5.3 Interior & Exterior Observations

5.3.1 Storage/Usage of Hazardous Substances and Petroleum Products

V'j' g'h'q'm'y' k'pi 'j' c'l' c't'f' q'w'u'w'd'u'c'p'eg'u'c'p'f' 'r' g'v'q'q'g'w'o' 'r' t'q'f' w'e'u'y' g't'g'q'dugt'x'g'f' 'v'q'd'g' 'u'q't'g'f' 'c'p'f' 'w'ug'f' 'd' { 'r' t'q'r' g't'v'k'u'0' 'q'ee'w' c'p'w'<'

Occupant	Substance	Qty/Container Type	Storage Conditions
PC''	P'q' 'u'ki' p'h'k'ec'p'v' 'u'q't'c'i' g'' q't' 'w'ug' 'p'q'v'g'f''	''	''

"

5.3.2 Drums

"

P q"j c| ctf qwu'uwduxpeg"qt"r gxtqrgwo "r tqf wevf two u'y gtg'pqvgf "qp"vj g'Rtqr gtvf 0"

"

5.3.3 Unidentified Substance Containers

"

P q"wpkf gpvklgf "uwduxpeg"eqpvkpgtu"uwur gevfg "qh'eqpvkpkpi "j c| ctf qwu'uwduxpeg"qt"r gxtqrgwo " r tqf wev'y gtg'pqvgf "qp"vj g'Rtqr gtvf 0"

"

5.3.4 Other Hazardous Substances/Petroleum Products

"

P q"qvj gt'eqpvkpgtu"qh"j c| ctf qwu'uwduxpegu"qt"r gxtqrgwo "r tqf wev'y gtg'pqvgf "qp"vj g'Rtqr gtvf 0"

"

5.3.5 Bulk Petroleum/Hazardous Material Storage Tanks

"

Vj g"hmny kpi "uxqci g"vcpm"lqt"dwm"r gxtqrgwo "qt"j c| ctf qwu"o cvgtkcn'uxqci g'y gtg'kf gpvklgf "qt" tgr qtvgf "v"dg'r tguvq="qt"ctg"uwur gevfg "v"dg'r tguvq"dcugf "qp"xkwn'qdugtxcvklpu<"

"

AST/UST	Product	Capacity	Construction	Year Installed	Status	Location/Notes
*pqpg+	"	"	"	"	"	"

"

Y j kg"pq"xkwn'gxf gpeg"qh"c"WUV"y cu"pqvgf ."eqpukf gtlpi "vj g"j kxqt { "qh"f gxgnr o gpv"cv"vj g" Rtqr gtvf ."vj g'r qvkvknr tguvqeg"qh'cdcpf qpgf "WUVu"cpf lqt"cuqekcvf "dwtkgf "r kr kpi "cv"vj g'Rtqr gtvf " ecppqv'dg'twgf "qwo"

"

5.3.6 PCBs in Oil Filled Electrical/Hydraulic Equipment

"

Vj g"gzkupi "ukg"ko r tqxgo gpw"y gtg"guvdrkuj gf "r tkqt "v"vj g'dcp"qh'REDu"lp"3; 9; 0Vj g"hmny kpi " qk/hkmgf "grvteknlj { f tcwle"gs wkr o gpv"y cu"kf gpvklgf "cv"vj g'Rtqr gtvf <"

"

Ugxgten'r qrg"o qwpv"wkrf "qy pgf "vcpuhqto gtu"y gtg"qdugtxgf "cnpi "7"Utggv"8"Utggv"cpf " O kukqp"kp"CxgpwqOP q"rgcnkpi "qt"uclpki "y cu"qdugtxgf "lp"vj g'xkpkv{"qh"vj g'vcpuhqto gtu0"

"

5.3.7 Odors

"

P q"utqpi ."r wpi gpv"qt"pqzkqwu"qf qtu"y gtg'pqvgf "cv"vj g'Rtqr gtvf 0"

"

5.3.8 Pools of Liquid

"

P q"ucpf kpi "y cvgt"qt"r qqn"qh'hs wkf "hknf "v"eqpvkpi"j c| ctf qwu'uwduxpegu"qt"r gxtqrgwo "r tqf wev" y gtg'pqvgf "cv"vj g'Rtqr gtvf 0"

"

5.3.9 Interior Stains or Corrosion

"

J km cpp"fkf "pqvj cxg"ceegu"lpv"vj g"qp/ukg"ut wewtgu"v"kpur gev'ht "kpgtkat "uclpu"qt"eqttqkqp0"

"

"

5.3.10 Interior Drains/Sumps

"

J km cpp" f kf "pqvj cxg"ceeguulkvj g"qp/ukg"ut wewtgu"vq"kpur gev'ht "vj g'r t gugpeg"qh'hmqt "f tckpu0"

"

5.3.11 Exterior Pits/Ponds/Lagoons

"

P q'gz vgtkt'r ku. r qpf u'qt'ici qppu'y cu'kf gpv'htgf "qp"vj g'Rtqr gtv' kf "eqppgevkqp"y kj "y cuvgt'ugco gpv' qt" f kur qucn0'

"

5.3.12 Stained Soil, Pavement/Stressed Vegetation

"

P q'uvkpgf "uqkn"r cxgo gpv'qt"ut guugf "xgi gvcvkqp"y cu'qdugtxgf "cv"vj g'Rtqr gtv'0'

"

5.3.13 On-Site Solid Waste Disposal/Fill Material

"

Vj g'hqmjy kpi "gxkf gpeg"qh'qp/ukg"uqrf "y cuvgt" f wo r kpi lf kur qucn'y cu'qdugtxgf <"

"

Uqemr kg'qh'f go rkuj gf "dvkf kpi "o cvgtkcn'cpf "ueter "o gvcn'y cu'qdugtxgf "qp"vj g"4; ; 5"O kuukqp"kp" Cxgpwg"cpf "4; ; 5"8y "Utggr' r ctegn0"Vtcuj "cpf "f gdtku"y gtg"uecwtgf "ctqwpf "vj g"gpv'kt gv' "qh"vj g" Rtqr gtv'0Ugxgtcn'uqkn'uvqemr kgu'y gtg"qdugtxgf "cmipi "4; ; 5"8y "Utggr'cpf "qp"xcecpv' r ctegn'433/244/ 2490"O t0"Vj qo cu'tgr qtvgf "vj g"uqkn'uvqemr kgu'y gtg"pvcxg"vq"vj g"Rtqr gtv'0" P q"qvj gt "gxkf gpeg"qh' wpcwj qtk gf "qp/ukg"uqrf "y cuvgt" f wo r kpi "qt"wpnqy p'hkn'o cvgtkcn'y cu'pqvgf "cv"vj g'Rtqr gtv'0"

"

5.3.14 Waste Water

"

Ucpkct { "ugy ci g'i gpgtcvgf "cv"vj g'Rtqr gtv' "ku" f kiej cti gf "xlc" c"eqppgevkqp"vq"vj g'mqecnr' wdrke"ugy gt" u{ ugo 0"

"

Uqto "y cvgt"twpqhh"cv"vj g"Rtqr gtv' "ku" f kiej cti gf "qh/ukg"vq"mqecnr'utgco ulf tckpci g"u{ ugo u"xlc" qxgtrcpf "hmjy "cpf "ecvej "dcukpu0"

"

P q'cf f kkpncn'y cuvgt"y cvgt" f kiej cti gu'y gtg'kf gpv'htgf "cv"vj g'Rtqr gtv'0"

"

5.3.15 Septic Systems

"

P q'ugr ke"u{ ugo u'y gtg'kf gpv'htgf "cv"vj g'Rtqr gtv'0"*****"

"

5.3.16 Wells"

"

P q'r qvcdrg. "o qpkqt kpi "qt"qvj gt "i tqwpf y cvgt"y gmu'y gtg'kf gpv'htgf "cv"vj g'Rtqr gtv'0"

5.3.17 Railroad Spurs"

"

Vj g'hqmjy kpi 'tckrtqcf "ur wtu'y gtg'pqvgf "qp"vj g'Rtqr gtv' <J km cpp"qdugtxgf "ugxgtcn'tcknu'cpf "y qqf " vku"y kj kp"vj g"hqto gt"tckrtqcf "tki j vqh/y c{ "uwr r qt vki "vj g"r quukdkv' "vj cv"tckrtqcf "vku"o c{ "dg" r t gupv'lwu'dgmjy "vj g'uwthceg"uqkn0T cktqcf "ur wtu'y gtg"qdugtxgf "qp"vj g"pqt vj y guv' r qt vki "qh"vj g" r ctegn'433/293/245"lwu'dgmjy "vj g'uwthceg"uqkn0Vj g'hqto gt"tckrtqcf "ur wtu'y gtg"uwgf "vq"ugt xleg"vj g"

"

hqtogt"rcenclpi"yctgj qwug"mcevgf"cv"57;8"Eqo o gteg"Utggt0 Hqtogt"tckrtqcf"urwtu"ygtg"
qdugtxgf"cmipi"Eqo o gteg"Utggt0Tckrtqcf"lgu"ctg"mpqy p"vq'dg'tgcvgf"y kj "qln/dcugf"cpf "ct/dcugf"
ej go kcnu"uwej "cu"etgquvg."cpf "tckrtqcf"urwtu"ctg"eqo o qpn{ "tgcvgf"y kj "r gukelf gu"hqt"y ggf "
eqptqr0Vj g"dwtkgf "tckrtqcf"lpglur wt"ku'eqpukf gtgf "vq'dg'c"TG E"lp"eqppgevkp"y kj "vj g"Rtqr gtv0"

6.0 INTERVIEWS

6.1 Interviews with Past and Present Owners and Occupants

Subject	Name/Affiliation	Summary
Rtqr gtv "Qy pgt" Tgr tguwpvkg	O t0Vqff 'Ecf y gm'	O t0'Ecf y gm'eqo r rvgf "cp" gpxkqpo gpvci's wguvqppckg"cpf "y cu" lpgvtxlgy gf "f wtkpi "y g'ukg"kpur gevkp0Rgtvkpgpv'kphqto cvkq'htqo " y j g" lpgvtxlgy " cpf " s wguvqppckg." y j gtg" cr r rkecdng." j cu" dggp" tghgtgpegf "lp"xctkqwu'ugevkpu'qh'yj ku'tgr qt0"
Rtqr gtv "Qeew cpw"	O t0Vqp{ "Vj qo cu"	Rtqr gtv "y cu"wpqeew kgf 00 t0Vj qo cu'y cu'lpgvtxlgy gf "cv'yj g'vko g" qh" y j g" cuuguo gpv0 Tgr qtvgf " y j g" hqto gt" utwewtgu" y gtg" hkg" f co ci gf 0'
Rcu'Qy pgtu." Qeew cpw "Qr gtcvtu"	P qv'cr r rkecdng"	Rcu' qy pgtulqeew cpw" qh' y j g" Rtqr gtv "y gtg" pqv' cxckcdng" hqt" lpgvtxlgy "cv'yj g'vko g'qh'yj g'cuuguo gpv0"
Qy pgtulQeew cpw'qh" Cf lqkpkpi "qt" P gctd{ " Rtqr gtvku"	P qv'cr r rkecdng"	Vj g" Rtqr gtv "y cu"pqv'cp"cdcpf qpgf "r tqr gtv "y kj "gxkf gpeg" qh' wpcwj qtk gf " wugu"qt" wpeqvtqmgf "ceeguu" y j gtghgtg." lpgvtxlgy u" y kj "cf lqkpkpi "qt"pgctd{ "r tqr gtv "y pgtu"qt"qeew cpw'y gtg"pqv' eqpf wvgf 0"

6.2 Interviews with State and/or Local Government Officials

Y tkwgp" cpf "qp/nkg" tgs wguw" hqt" gpxkqpo gpvci" tgeqtf u" qh' y j g" Rtqr gtv "htqo " Ucvg" cpf "Nqecri" i qxgtpo gpvci'ci gpekgtg' f gvckrgf "lp" Ugevkp "660"

7.0 BUSINESS ENVIRONMENTAL RISKS

"
Kp"ceeqtf cpeg"y kj "y g"eqpvtcev"ci tggo gpv"htq"y ku"cuuguuo gpv."J km cpp"j cu"r gthqto gf "ewtuqt { "
tgxlg y u" qh" ugxgtcn' r qvgn'cn' Dwukpguu" Gpxkqpo gpvcn' Tkumu" *cnuq" npqy p" cu" oP qp/Ueqr g"
Eqpukf gtcvkuuö+0"Vj g"CUVO "G3749/35"ucpf ctf "f ghpgu" y g"vgo "dwukpguu" gpxkqpo gpvcn' tkum'
*DGT +"cu." "a risk which can have a material environmental or environmentally-driven impact on
the business associated with the current or planned use of a parcel of commercial real estate, not
necessarily limited to those environmental issues required to be investigated in this practice. ""
"

7.1 Asbestos-Containing Material (ACM)

"
Vj g"eqpvtcevgf "ueqr g"qh'y qtm' kpenwf gf "c" ewtuqt { "xkuwcn' uetggpkpi "qh' y g" ceeguugf " r qt vkuu" qh'
dwnf kpi u"cv'y g"Rtqr gtv "dwn'r tkqt "v"3; ; 2"htq "uwur gev" cudguqu" eqpvckkpi "o cvgtkcu" *CEO +0"Vj g"
kphqto cvkp'r tqxkf gf "kp"y ku"ugevqp. "y j gtg"cr r necdng. "ku'iko kgf "v"kf gpvhtecvqp"qh'r qvgn'cn'uwur gev'
o cvgtkcu"kp"y g"tgcf kf "ceeguukdng"cpf "qdugtxgf "ctgcu"qh'y g"dwnf kpi . "cpf "y gk"i gpgtcn'eqpf kkp0'
Vj ku'ku'pqv'kpvpgf gf "v"dg"c"eqo r tgj gpukxg"uwtxg{ "htq"y g"r tgugpeg"qh'CEO . "cpf "pq"vgnkpi "j cu"dggp"
eqpf wevgf 0"
"

"
"Dcugf "qp" dwnf kpi "ci g." CEO "o c { "dg"r tgugpv."j qy gxgt. "kpvgtkqtu" qh' y g" utwewtgu" y gtg"pqv'
cxckrdng"htq'kpur gevqp"cv'y g'vko g"qh'y g'ukg'xkuk'f wg"vq"uchgv "eqpegtpu0""
"

7.2 Lead-Based Paint

"
Vj g"eqpvtcevgf "ueqr g"qh'y qtm' kpenwf gf "c" ewtuqt { "xkuwcn' uetggpkpi "qh' y g" eqpf kkp"qh'r ckpvf "uwtcegu"
kp"y g" ceeguugf "ctgcu"qh'tgukf gpvcn' dwnf kpi uwpku" dwn'r tkqt "v"3; ; 20"Vj ku'ku'pqv'kpvpgf gf "v"
eqpukwng"c"eqo r tgj gpukxg"uwtxg{ "htq" NDR"qt "r qvgn'cn'ngcf "j c| ctf u."cpf "pq"vgnkpi "j cu"dggp"
eqpf wevgf 0"
"

"
P q"tgukf gpvcn'dwnf kpi u"dwn'r tkqt "v"3; ; 2"y gtg"r tgugpv"cv'y g"Rtqr gtv{ 0""
"

7.3 Radon

"
F cv"eqo r kgf "d { "y g" WUGRC. "cu'uwu o ctkt gf "d { "y g"tgi wrcvt { "f cvdcug"tgr qtv" kpf kecvf "y cv'y g"
Rtqr gtv "ku"mccvfg "kp"cp"ctgc"ercuukkgf "cu" \ qpg"4"qt")o qf gtcvg"tkum)ctgc"htq"tcf qp0Tcf qp"vgnkpi "
y cu'pqv'kpenwf gf "kp"y g"ueqr g"qh'y ku"cuuguuo gpv0"
"

7.4 Mold/Microbial Damage

"
Cu'r gt"y g"eqpvtcevgf "ueqr g"qh'y qtm' J km cpp"eqpf wevgf "c" ewtuqt { "xkuwcn' uetggpkpi "qh' y g" ceeguugf "
ctgcu"qh'y g"dwnf kpi "htq"gxkf gpeg"qh'uki phtecpv'f co ci g"vq" dwnf kpi "o cvgtkcu"cpf "hpkuj gu"cu'tguwn'
qh'o qkwtg"kpvtwukp"cpf lqt"o qrf lo ketqdkcn' tgy y 0"
"

"
Kpvgtkqtu"qh'y g"utwewtgu"y gtg"pqv'cxckrdng"htq'kpur gevqp"htq"o qrf lo ketqdkcn'f co ci gu"cv'y g'vko g"
qh'y g'ukg'xkuk'f wg"vq"uchgv "eqpegtpu0""
"

"

7.5 NWI Mapped Wetlands

"

Cu"lpf kecvf "lp"vj g"Rj { ulecn"Ugwłpi "Uqwtg"vdrđ"qh"Ugevkqp"60B."pq"PY Kō cr r gf "y gwłpf u"ctgcu" y gtg"f gr levgf "cv"vj g"Rtqr gtv{ "d{ "vj g"GF T" I gqej gem"Rj { ulecn"Ugwłpi "Uqwtg"Cf f gpf wo "cwcej gf " lp"Cr r gpf k"G+0""

"

Vj g"ueqr g"qh'y qtmłqt "vj ku"cuuguuo gpv"gzemf gu"cxkucnlf gvgto kpcvkqp"qh'tgi wrcvgf "y gwłpf u"cv"vj g" Rtqr gtv{ "0K"ku"go r j cuk gf "vj cv"tgi ctf rguu"qh"vj g"y gwłpf u"fcv"qdvckpgf "xlc"vj g"GF T" I gqej gem" Rj { ulecn"Ugwłpi "Uqwtg"Cf f gpf wo ."c"fgkpgcvkqp"qh'tgi wrcvgf "y gwłpf u"d{ "c"s wcnłkf "r tqhguukqpcn" y qwf "dg"y cttcpvgf "q"fgvgto kpg"vj g"r tgugpeg"qt"cdugpeg"qh'tgi wrcvgf "y gwłpf u"cv"vj g"Rtqr gtv{ "0"

"

7.6 Lead in Drinking Water

"

Vj g"ueqr g"qh'y qtmłqt "vj ku"cuuguuo gpv"kpemf gf "c"tgxkgy "qh"vj g"r qvgpvkcnłqt"grgxcvgf "rgxgn"qh"rgcf " lp"ftkpnłpi "y cvgt"d{ "f gvgto kpnłpi "vj g"uqwtg"qh"vj g"ftkpnłpi "y cvgt"uwr r n{ "cpf"c"tgxkgy "qh"cxckrdđ" eqo r rncpeg"qt"vgułpi "fcv0"

"

Rqvcđđ"y cvgt"ugt xkcg"cv"vj g"Rtqr gtv{ "ku"r tqxkf gf "d{ "c"wkłk{ "eqppgevkqp"y kj "vj g"Ekł{ "qh"Tkxgtulf g" Rwdnke"Wkłkgu0C"tgegpvł{ "r wdnłuj gf "y cvgt"s wcnłk{ "tgr qtv"łtqo "vj g"wkłk{ "lpf kecvf "eqo r rncpeg" y kj "WUGRC"y cvgt"s wcnłk{ "ucpf ctf u"łqt"rgcf "lp"ftkpnłpi "y cvgt0C"eqr { "qh"vj g"tgr qtv"j cu"dggp" cwcej gf "lp"Cr r gpf kz"HD"

8.0 REFERENCES

CUVO "G3749/35/Ucpf ctf "Rtcevleg" hqt "Gpxktqpo gpvcn" Ukg "Cuuguuo gpv" Rj cug "K'Gpxktqpo gpvcn" Ukg "Cuuguuo gpv" Rtqegu = "CUVO "K'vgtpcvkqpcn "4235"

CUVO "G34822/37/Ucpf ctf "I wkf g" hqt "Xcr qt" Gpetqcej o gpv "Uetggpkpi "qp" Rtqr gtv "K'pxqrxgf "kp" T gcn "Gucvg" Vtcpucev kq. "CUVO "K'vgtpcvkqpcn "4237"

GF T "Tcf kwu" O cr "Tgr qt v'y kj "I gqEj gem"^{VO}. "Gpxktqpo gpvcn" F cv "T guqwtegu. "4243"

GF T "Ekv "F k'gevqt { "C durtcev" Tgr qt v. "Gpxktqpo gpvcn" F cv "T guqwtegu. "4243"

GF T "Ucpdqtp" O cr "Tgr qt v. "Gpxktqpo gpvcn" F cv "T guqwtegu. "4243"

O gj qf qmi { "hqt "K'gpwhf kpi "v' g" Ctgc "qh" Epegt p "Ctqwpf "c" Rtqr gtv "Rqvgpvc m" "K' r cev g" d { "Xcr qt" O ki tcv kq p "h" go "P gctd { "Eqpvco kpcv g" "Uqwtegu = "C0Dwqpkqtg. "4233"

Rj cug "K'Gpxktqpo gpvcn" Ukg "Cuuguuo gpv. "4; ; 4. "522: "7^y "Utg gv. "4; ; 5 "8^y "Utg gv. "57; 8 "Eqo o gteg. "4; ; 5 "O kuukq p "K'p "C xgpwg. "J km cpp "Eqpuwnkpi . "Hgdwtct { "4; . "4238"

Tgxkgf "Tgo gf kcn" Cevkq p "Rrcp. "Tlxgtukf g" Ueter "Kq p" ("O gvcn "4; ; 5 "Ukz vj "Utg gv. "Tlxgtukf g. "Ecrkhqtpk" ; 4729. "F VUE "F qengv "J CU/H 37138/374 = I UKGpxktqpo gpvcn "Lwn { "45. "423; . "tgxkgf "Lcpwct { "4. "4242"

"

APPENDIX A

MAPS / DIAGRAMS

"

"

"



Figure 1: Site Vicinity Map

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce, &
2993 Mission Inn Avenue
Riverside, California

N



SCALE:

(NOT TO SCALE)

PROJECT No.: C3-8655





Figure 2: Site Diagram

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce, &
 2993 Mission Inn Avenue
 Riverside, California

N



SCALE: (NOT TO SCALE)

PROJECT No.: C3-8655

APPENDIX B
SITE PHOTOGRAPHS

SITE PHOTOGRAPHS



View of 2993 Mission Inn Avenue looking south



View of former building pads



View of the Property looking west



View of concrete pits - former scale with metal plates



View of the Property looking northwest



View of the building on the southeast portion of the Property

PHASE I ESA - SITE PHOTOGRAPHS

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce,
& 2993 Mission Inn Avenue,
Riverside, California

Project No.:

C3-8655



SITE PHOTOGRAPHS



Interior view of the building on southeast portion of the Property



View of the portion of the building collapsed due to recent fire



View of former elevator shaft



View of 3596 Commerce Street and 2993 6th Street



View of building material debris, scrap metal, and former concrete pit scale



View of canopy area to the east – 2993 6th Street parcel

PHASE I ESA - SITE PHOTOGRAPHS

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce, & 2993 Mission Inn Avenue, Riverside, California

Project No.:

C3-8655



SITE PHOTOGRAPHS



View of former concrete pads for former bailer and cranes on the 2993 6th Street parcel



View of remains of the former structure on the 2993 6th Street parcel



View of the northern portion of the Property



Railroad spurs to the north west side of the Property observed along parcel 211071023



View of trash dumpster



View of former packaging warehouse – 3596 Commerce Street- sealed

PHASE I ESA - SITE PHOTOGRAPHS

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce,
& 2993 Mission Inn Avenue,
Riverside, California

Project No.:

C3-8655



SITE PHOTOGRAPHS



View of the Property from the southwest corner



View of the Property from the southern corner



View of adjoining property across 4th Street



View of adjoining properties to the north west along 5th Street



View of adjoining property to the east along 6th Street



View of pole mount transformer

PHASE I ESA - SITE PHOTOGRAPHS

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce,
& 2993 Mission Inn Avenue,
Riverside, California

Project No.:

C3-8655



SITE PHOTOGRAPHS



View of former rail road spurs along Commerce Street



View of property looking north -211-022-027 parcel

PHASE I ESA - SITE PHOTOGRAPHS

2992, 3008 5th Street, 2993 6th Street, 3596 Commerce,
& 2993 Mission Inn Avenue,
Riverside, California

Project No.:

C3-8655



Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

Not Applicable.

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

Santa Ana Watershed - BMP Design Volume, V_{BMP}
(Rev. 10-2011)

Legend: Required Entries
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name KHR Associates Date 8/2/2024
Designed by James H. Kawamura Case No _____
Company Project Number/Name Iron Lofts

BMP Identification

BMP NAME / ID DW 1
Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, D_{85} = 0.60 inches
from the Isohyetal Map in Handbook Appendix E

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_e	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
1A	24,357	Ornamental Landscaping	0.1	0.11	2690.4	0.60	5824.5	5,875
1B	61,934	Roofs	1	0.89	55245.1			
1C	21,520	Concrete or Asphalt	1	0.89	19195.8			
1D	44,125	Concrete or Asphalt	1	0.89	39359.5			
151936		Total			116490.8			

Notes:

DRYWELL & DETENTION DESIGN CALCULATIONS

Drywell #1 (Combination of DW1A, DW1B, DW1C, DW1D)

Mitigation Volume, V_{BMP} :	5,825 C.F.	From BMP Design Worksheet
Infiltration Rate, $K_{sat,measured}$:	1.60 in/hr	Test Well W-9
Factor of Safety, FS:	3	
Number of Drywells; $DW_{quantity}$:	4 each	
DW Chamber ϕ :	4 feet	
DW Chamber Area, DWC_{Area} :	12.57 square feet per foot	
DW Chamber Volume, DWC_{Volume} :	12.57 cubic feet per foot	
$DW_{chamber,depth}$ (from invert down):	7.45 linear feet	
DW Rock Shaft ϕ :	4 feet	
DW Rock Shaft Area, DWR_{Area} :	12.57 square feet per foot	
DW Rock Shaft Volume, DWR_{Volume} :	12.57 cubic feet per foot	
$DW_{rock,depth}$:	50.00 linear feet	
$DW_{infiltration,depth}$:	57.45 linear feet	
DW Bottom Area, DWB_{Area} :	12.57 square feet per foot	
T (Maximum Drawdown Time):	48 hr	
CMP Diameter (detention):	8 feet	
CMP_{Volume} :	50.2 cubic feet per foot	
CMP_{Length} :	90 linear feet	

Determine Design Infiltration Rate, $K_{sat,design}$

$$K_{sat,design} = K_{sat,measured} \div FS$$

$$K_{sat,design} = 0.53 \text{ in/hr} \quad 0.000012 \text{ ft/sec}$$

Determine Minimum Infiltration Surface Area, A_{min}

$$A_{min} = (V_{BMP} \times 12 \text{ in/ft}) \div (T \times K_{sat,design})$$

$$A_{min} = 2,730 \text{ S.F.}$$

Determine Infiltration Surface Area, A_{actual}

$$A_{actual} = (DW_{infiltration,depth} \times DWR_{Area} + DWB_{Area}) \times DW_{quantity}$$

$$A_{actual} = 2,939 \text{ S.F.}$$

Determine Volume of Drywell, $V_{drywell}$

$$V_{drywell} = (DWC_{Volume} \times DW_{chamber,depth}) + (DWR_{Volume} \times DW_{rock,depth} \times 0.40) \times DW_{quantity}$$

$$V_{drywell} = 1,380 \text{ C.F.}$$

Determine Volume Remaining to Detain in CMP, V_{detain}

$$V_{detain} = V_{BMP} - V_{drywell}$$

$$V_{detain} = 4,445 \text{ C.F.}$$

Determine CMP Detention Volume, $V_{CMP,detain}$

$$V_{CMP,detain} = CMP_{Volume} \times CMP_{Length}$$

$$V_{CMP,detain} = 4,495 \text{ C.F.}$$

Determine DW & CMP Volume, V_{design}

$$V_{design} = V_{CMP,detain} + V_{drywell}$$

$$V_{design} = 5,875 \text{ C.F.}$$

Determine Drawdown Time, T_{actual}

$$T_{actual} = (V_{design} \times 12 \text{ in/ft}) \div (A_{actual} \times K_{sat,design})$$

$$T_{actual} = 44.98 \text{ hr}$$

Santa Ana Watershed - BMP Design Volume, V_{BMP}
 (Rev. 10-2011)

Legend: Required Entries
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name KHR Associates Date 8/2/2024
 Designed by James H. Kawamura Case No
 Company Project Number/Name Iron Lofts

BMP Identification

BMP NAME / ID DW 2
Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, $D_{85} =$ 0.60 inches
 from the Isohyetal Map in Handbook Appendix E

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_e	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
2A	20,932	Ornamental Landscaping	0.1	0.11	2312.1			
2B	70,323	Roofs	1	0.89	62728.1			
2C	13,732	Concrete or Asphalt	1	0.89	12248.9			
2D	45,214	Concrete or Asphalt	1	0.89	40330.9			
150201		Total			117620	0.60	5881	5,909

Notes:

(Note this worksheet shall only be used in conjunction with BMP designs from the LID BMP Design Handbook)

Company Name KHR Associates Date 8/2/2024
 Designed by James H. Kawamura Case No
 Company Project Number/Name Iron Lofts

BMP Identification

BMP NAME / ID DW 2
Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

Design Rainfall Intensity I = 0.20 in/hr

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type <i>(use pull-down menu)</i>	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Rainfall Intensity (in/hr)	Design Flow Rate (cfs)	Proposed Flow Rate (cfs)
2A	20,932	<i>Ornamental Landscaping</i>	0.1	0.11	2312.1			
2B	70,323	<i>Roofs</i>	1	0.892	62728.1			
2C	13,732	<i>Concrete or Asphalt</i>	1	0.892	12248.9			
2D	45,214	<i>Concrete or Asphalt</i>	1	0.892	40330.9			
	150201		<i>Total</i>		117620	0.20	0.5	1.1

Notes:

DRYWELL & DETENTION DESIGN CALCULATIONS

Drywell #2 (Combination of DW2A, DW2B, DW2C, DW2D)

Mitigation Volume, V_{BMP} :	5,881 C.F.	From BMP Design Worksheet
Infiltration Rate, $K_{sat,measured}$:	1.60 in/hr	Test Well W-10
Factor of Safety, FS:	3	
Number of Drywells; $DW_{quantity}$:	4 each	
DW Chamber ϕ :	4 feet	
DW Chamber Area, DWC_{Area} :	12.57 square feet per foot	
DW Chamber Volume, DWC_{Volume} :	12.57 cubic feet per foot	
$DW_{chamber,depth}$ (from invert down):	9.78 linear feet	
DW Rock Shaft ϕ :	4 feet	
DW Rock Shaft Area, DWR_{Area} :	12.57 square feet per foot	
DW Rock Shaft Volume, DWR_{Volume} :	12.57 cubic feet per foot	
$DW_{rock,depth}$:	50.00 linear feet	
$DW_{infiltration,depth}$:	59.78 linear feet	
DW Bottom Area, DWB_{Area} :	12.57 square feet per foot	
T (Maximum Drawdown Time):	48 hr	
CMP Diameter (detention):	6 feet	
CMP_{Volume} :	28.2 cubic feet per foot	
CMP_{Length} :	156 linear feet	

Determine Design Infiltration Rate; $K_{sat,design}$

$$K_{sat,design} = K_{sat,measured} \div FS$$

$$K_{sat,design} = 0.53 \text{ in/hr} \quad 0.000012 \text{ ft/sec}$$

Determine Minimum Infiltration Surface Area, A_{min}

$$A_{min} = (V_{BMP} \times 12 \text{ in/ft}) \div (T \times K_{sat,design})$$

$$A_{min} = 2,757 \text{ S.F.}$$

Determine Infiltration Surface Area, A_{actual}

$$A_{actual} = (DW_{infiltration,depth} \times DWR_{Area} + DWB_{Area}) \times DW_{quantity}$$

$$A_{actual} = 3,056 \text{ S.F.}$$

Determine Volume of Drywell, $V_{drywell}$

$$V_{drywell} = (DWC_{Volume} \times DW_{chamber,depth}) + (DWR_{Volume} \times DW_{rock,depth} \times 0.40) \times DW_{quantity}$$

$$V_{drywell} = 1,497 \text{ C.F.}$$

Determine Volume Remaining to Detain in CMP, V_{detain}

$$V_{detain} = V_{BMP} - V_{drywell}$$

$$V_{detain} = 4,384 \text{ C.F.}$$

Determine CMP Detention Volume, $V_{CMP,detain}$

$$V_{CMP,detain} = CMP_{Volume} \times CMP_{Length}$$

$$V_{CMP,detain} = 4,412 \text{ C.F.}$$

Determine DW & CMP Volume, V_{design}

$$V_{design} = V_{CMP,detain} + V_{drywell}$$

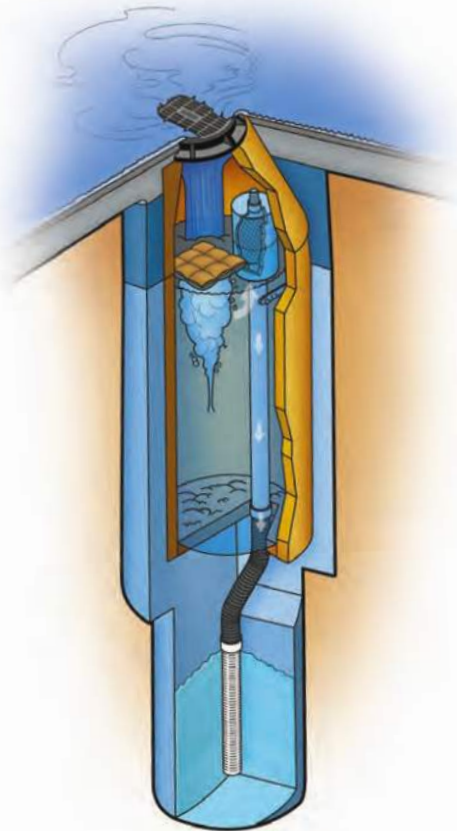
$$V_{design} = 5,909 \text{ C.F.}$$

Determine Drawdown Time, T_{actual}

$$T_{actual} = (V_{design} \times 12 \text{ in/ft}) \div (A_{actual} \times K_{sat,design})$$

$$T_{actual} = 43.51 \text{ hr}$$

The **MaxWell® IV**, as manufactured and installed exclusively by Torrent Resources Incorporated, is the industry standard for draining landscaped developments and paved areas. This patented system incorporates the latest refinements in pre-treatment technology.



PROVEN DESIGN

Since 1974, nearly 65,000 MaxWell® Systems have proven their value as a cost-effective solution in a wide variety of drainage applications. They are accepted by state and municipal agencies and are a standard detail in numerous drainage manuals.

ADVANCED PRE-TREATMENT

Industry research, together with Torrent Resources' own experience, have shown that initial storm drainage flows have the greatest impact on system performance. This "first flush" occurs during the first few minutes of runoff, and carries the majority of sediment and debris. This results in the need for effective processing

of runoff from landscaped and paved surfaces. In the **MaxWell® IV**, preliminary treatment is provided through collection and separation in a deep, large-volume chamber where silt and other heavy particles settle to the bottom. The standard MaxWell IV System has over 1,500 gallons of capacity to contain sediment and debris carried by incoming water. Floating trash, paper, pavement oil, etc. are effectively stopped by the **PureFlo®** Debris Shield on top of the overflow pipe. Water is drained from the system by rising up to the top of the overflow pipe and under the Debris Shield. The solid metal shields are equipped with an internal screen to filter suspended matter and are vented to prevent siphoning of floating surface debris. The drainage assembly returns the cleaned water into the surrounding soil through the **FloFast®** Drainage Screen.

ABSORBENT TECHNOLOGY

The MaxWell IV settling chamber is equipped with an absorbent sponge to provide prompt removal of pavement oils. These floating pillow-like devices are 100% water repellent and literally wick petrochemical compounds from the water. Each sponge has a capacity of up to 128 ounces to accommodate effective, long-term treatment. The absorbent is completely inert and will safely remove runoff constituents down to rainbow sheens that are typically no more than one molecule thick.

SECURITY FEATURES

MaxWell IV Systems include bolted, theft-deterrent, cast iron gratings and covers as standard security features. Special inset castings that are resistant to loosening from accidental impact are available for use in landscaped applications. Machined mating surfaces and "Storm Water Only" wording are standard.

THE MAXWELL FIVE-YEAR WARRANTY

Innovative engineering, quality materials and exacting construction are standard with every MaxWell System designed, manufactured and installed by Torrent Resources Incorporated. The MaxWell Drainage System Warranty is the best in the industry and guarantees against failures due to workmanship or materials for a period of five years from date of completion.