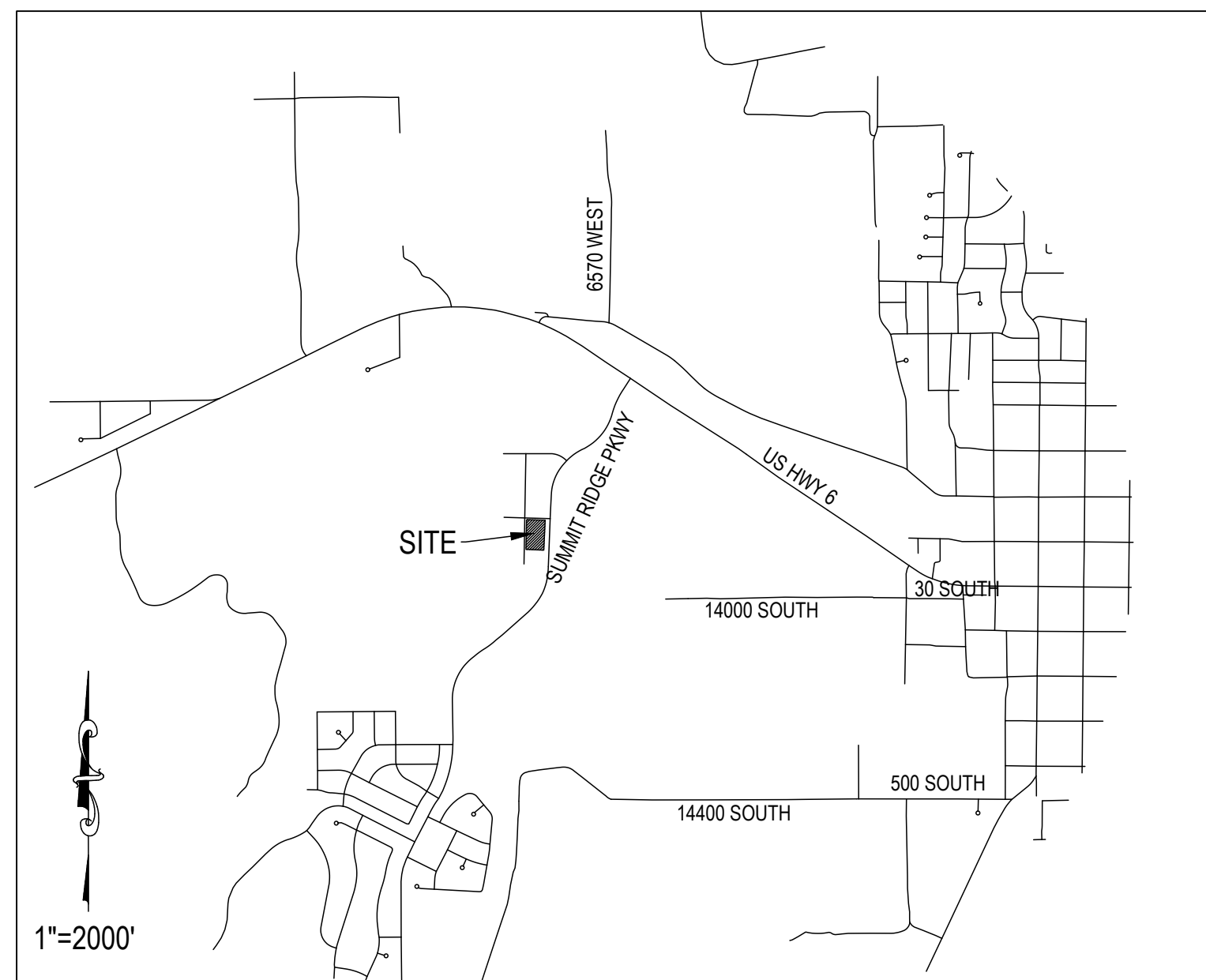


CC CALLAWAY

VICINITY MAP



GENERAL NOTES:

1. THE DEVELOPER AND THE GENERAL CONTRACTOR UNDERSTAND THAT IT IS HIS/HER RESPONSIBILITY TO ENSURE THAT ALL IMPROVEMENTS INSTALLED WITH THIS DEVELOPMENT ARE CONSTRUCTED IN FULL COMPLIANCE WITH ALL STATE AND SANTAQUIN CITY CODES, ORDINANCES AND STANDARDS. THESE PLANS ARE NOT ALL INCLUSIVE OF ALL MINIMUM CODES, ORDINANCES AND STANDARDS. THIS FACT DOES NOT RELIEVE THE DEVELOPER OR GENERAL CONTRACTOR FROM FULL COMPLIANCE WITH ALL MINIMUM STATE AND SANTAQUIN CITY CODES, ORDINANCES AND STANDARDS.
2. ALL RECOMMENDATIONS MADE IN A PERTINENT GEOTECHNICAL REPORT/STUDY SHALL BE FOLLOWED EXPLICITLY DURING CONSTRUCTION OF BUILDINGS AND SITE IMPROVEMENTS.
3. FEMA FLOODPLAIN: SITE IS LOCATED IN UNMAPPED AREA.
4. THE PROPOSED OFFICE WAREHOUSE WILL NOT BE FIRE SPRINKLED.

NOTES TO CONTRACTOR

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CURB & GUTTER, STORM DRAIN, & SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PLANS.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE AND ALL UNDERGROUND UTILITIES, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THESE PLANS.

BOUNDARY DESCRIPTION

Lots 3 and 4, Santaquin Peaks Industrial Park, Santaquin, Utah County, Utah, according to the official plat thereof on file and of record in the Utah County Recorder's Office, also, a portion of parcel 32:009:0101, more particularly described as follows:

Beginning at a point located South 1624.13 feet and East 316.56 feet from the North Quarter Corner of Section 3, Township 10 South, Range 1 East, Salt Lake Base and Meridian; thence along the arc of a 15.00 foot radius curve to the right 23.77 feet through a central angle of 90°48'27" (chord bears North 46°21'25" East 21.36 feet); thence South 88°14'22" East 232.30 feet; thence South 2°41'29" West along the westerly right-of-way line of Summit Ridge Parkway a distance of 394.99 feet; thence North 87°35'11" West 234.57 feet; thence North 0°57'11" East 378.10 feet to the point of beginning.

Basis of Bearing being South 89°30'24" West along section line 2649.05 feet from the North Quarter Corner of said Section 3 to the Northwest Corner of said Section 3)

Area = 94,628 sq ft or 2.172 Acres

ABBREVIATION TABLE

FFE	FINISHED FLOOR ELEV.
BOW	BACK OF WALK
GB	GRADE BREAK
TC	TOP OF CONCRETE
TBC	TOP BACK OF CURB
TA	TOP OF ASPHALT
EA	EDGE OF ASPHALT
RIM	RIM ELEVATION
FL	FLOWLINE
EG	EXIST GROUND
FG	FINISHED GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
SF	SQUARE FOOTAGE
P.U.E.	PUBLIC UTILITY EASEMENT
SLB&M	SALT LAKE BASE & MERIDIAN
COR	CORNER
N	NORTH
S	SOUTH
E	EAST
W	WEST
P.I.	PRESSURIZED IRRIGATION
SS	SANITARY SEWER
SD	STORM DRAIN
T	TOWNSHIP
R	RANGE
RCP	REINFORCED CONCRETE PIPE
WM	WATER METER
CB	CATCH BASIN
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
FH	FIRE HYDRANT
L.F.	LINEAR FEET
S=X	SLOPE
IE	INVERT ELEVATION
C.O.	CLEAN OUT
SL	SEWER LATERAL

SHEET INDEX

C1	COVER SHEET
C2	SITE PLAN
C3	UTILITY PLAN
C4	GRADING & DRAINAGE PLAN
C5	EROSION CONTROL PLAN
C6	DETAIL SHEET
C7	DETAIL SHEET

SURVEYOR:



BENCH MARK NORTH QUARTER CORNER, SECTION 3, TOWNSHIP 10 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN ELEVATION = 4851.13	REVISIONS		Developer: Rob Weber Phone: 801-360-1039 EXCEL ENGINEERING David W. Peterson, P.E., License #270393 12 West 100 North, Suite 201C, American Fork, UT 84003 P: (801) 756-4504; david@excelcivil.com	CC CALLAWAY SANTAQUIN 77 N. SUMMIT RIDGE PKWY UTAH																													
	<table border="1"> <thead> <tr> <th>Rev.</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Rev.		Date	Description																												Drawn by: D.W.P. Designed by: D.W.P. Checked by: D.W.P.
Rev.	Date	Description																															



GENERAL SITE NOTES
 1. ALL CONSTRUCTION TO CONFORM TO SANTAQUIN CITY STANDARDS AND SPECIFICATIONS.

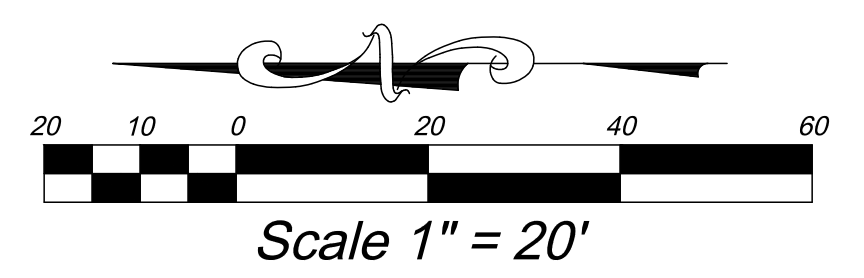
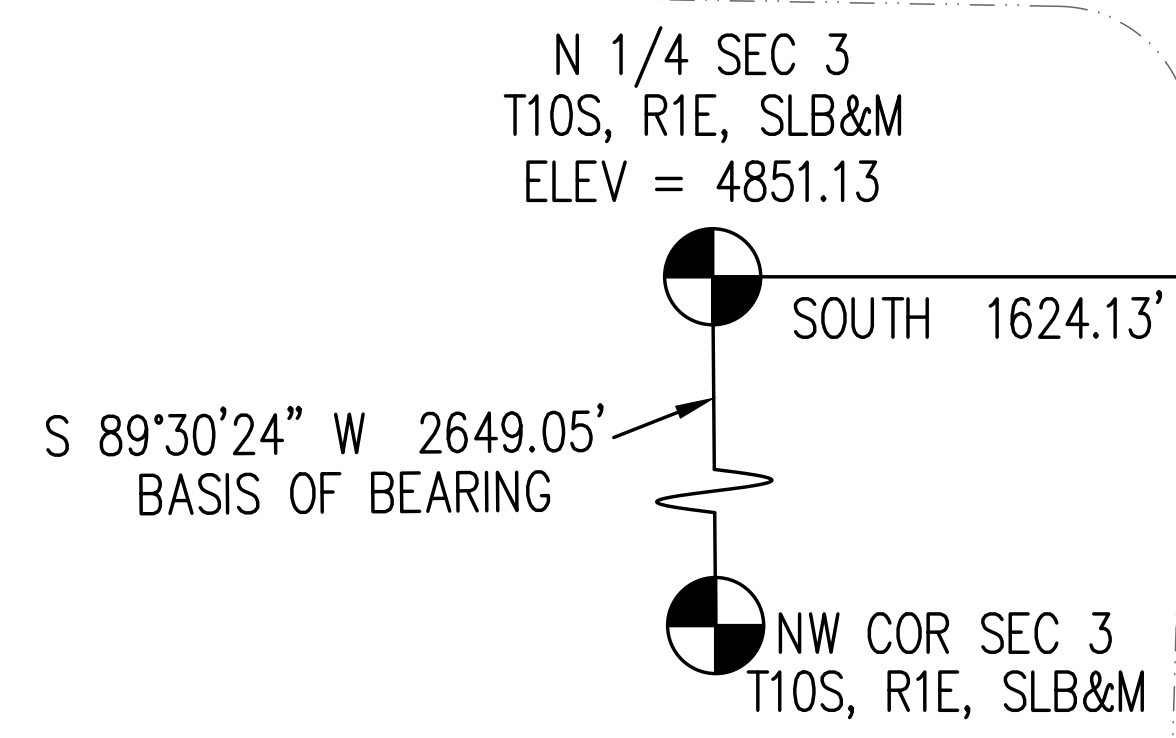
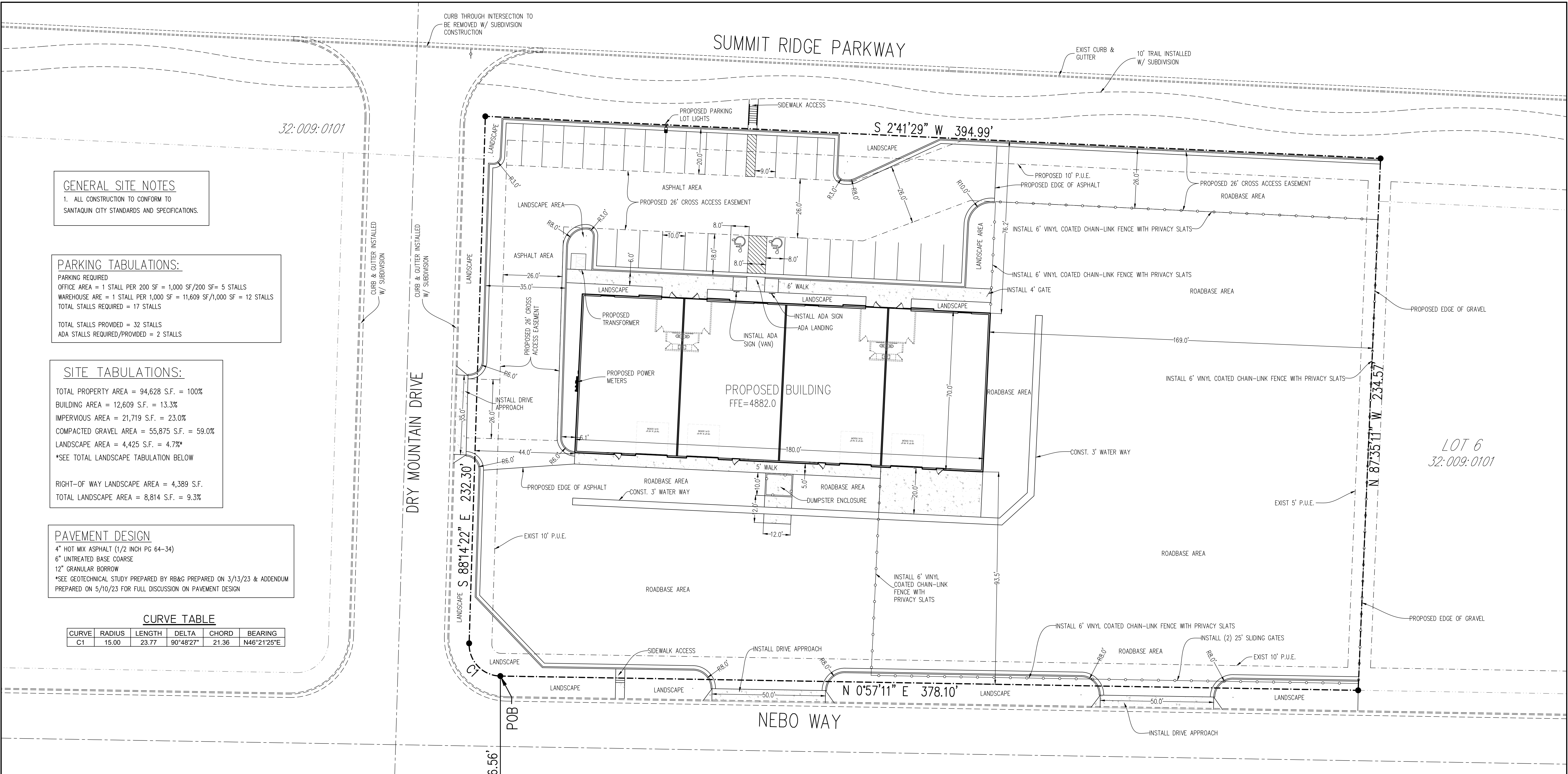
PARKING TABULATIONS:
 PARKING REQUIRED
 OFFICE AREA = 1 STALL PER 200 SF = 1,000 SF/200 SF = 5 STALLS
 WAREHOUSE ARE = 1 STALL PER 1,000 SF = 11,609 SF/1,000 SF = 12 STALLS
 TOTAL STALLS REQUIRED = 17 STALLS
 TOTAL STALLS PROVIDED = 32 STALLS
 ADA STALLS REQUIRED/PROVIDED = 2 STALLS

SITE TABULATIONS:
 TOTAL PROPERTY AREA = 94,628 S.F. = 100%
 BUILDING AREA = 12,609 S.F. = 13.3%
 IMPERVIOUS AREA = 21,719 S.F. = 23.0%
 COMPACTED GRAVEL AREA = 55,875 S.F. = 59.0%
 LANDSCAPE AREA = 4,425 S.F. = 4.7%*
 *SEE TOTAL LANDSCAPE TABULATION BELOW
 RIGHT-OF WAY LANDSCAPE AREA = 4,389 S.F.
 TOTAL LANDSCAPE AREA = 8,814 S.F. = 9.3%

PAVEMENT DESIGN
 4" HOT MIX ASPHALT (1/2 INCH PG 64-34)
 6" UNTREATED BASE COARSE
 12" GRANULAR BORROW
 *SEE GEOTECHNICAL STUDY PREPARED BY RB&G PREPARED ON 3/13/23 & ADDENDUM PREPARED ON 5/10/23 FOR FULL DISCUSSION ON PAVEMENT DESIGN

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	CHORD	BEARING
C1	15.00	23.77	90°48'27"	21.36	N46°21'25"E



BENCH MARK		REVISIONS	
Rev.	Date	Rev.	Date
NORTH QUARTER CORNER, SECTION 3, TOWNSHIP 10 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN ELEVATION = 4851.13			

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EXCEL ENGINEERING
 David W. Peterson, P.E., License #270393
 12 West 100 North, Suite 201C, American Fork, UT 84003
 P: (801) 756-4504; david@excelcivil.com

CC CALLAWAY		
SANTAQUIN	77 N. SUMMIT RIDGE PKWY	UTAH
Drawn by: D.W.P.	Scale: 1"=20'	Date: 03/13/24
Designed by: D.W.P.	SITE PLAN	
Checked by: D.W.P.		
		C2

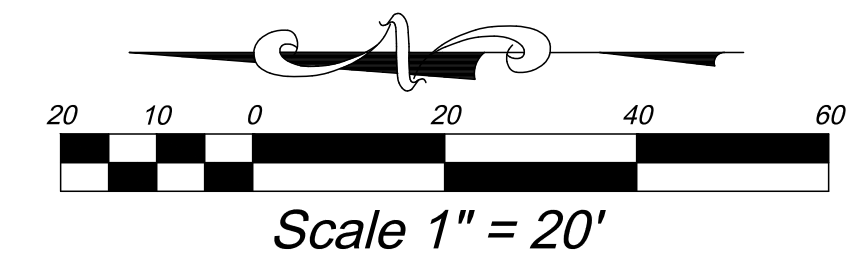
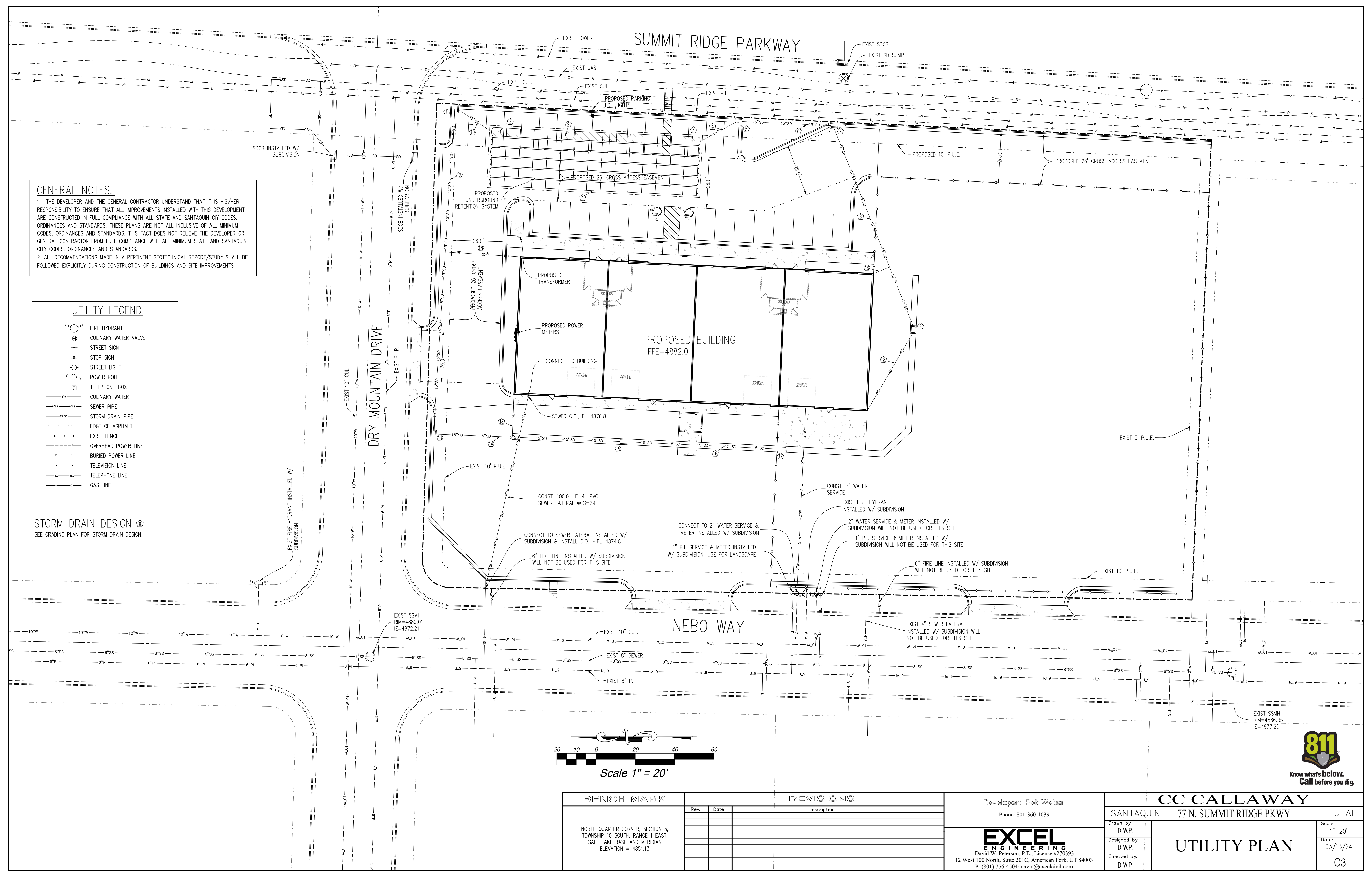
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UTILITY LEGEND

	FIRE HYDRANT
	CULINARY WATER VALVE
	STREET SIGN
	STOP SIGN
	STREET LIGHT
	POWER POLE
	TELEPHONE BOX
	CULINARY WATER
	SEWER PIPE
	STORM DRAIN PIPE
	EDGE OF ASPHALT
	EXIST FENCE
	OVERHEAD POWER LINE
	BURIED POWER LINE
	TELEVISION LINE
	TELEPHONE LINE
	GAS LINE

STORM DRAIN DESIGN
SEE GRADING PLAN FOR STORM DRAIN DESIGN.



BENCH MARK		REVISIONS	
NORTH QUARTER CORNER, SECTION 3, TOWNSHIP 10 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN ELEVATION = 4851.13		Rev.	Date
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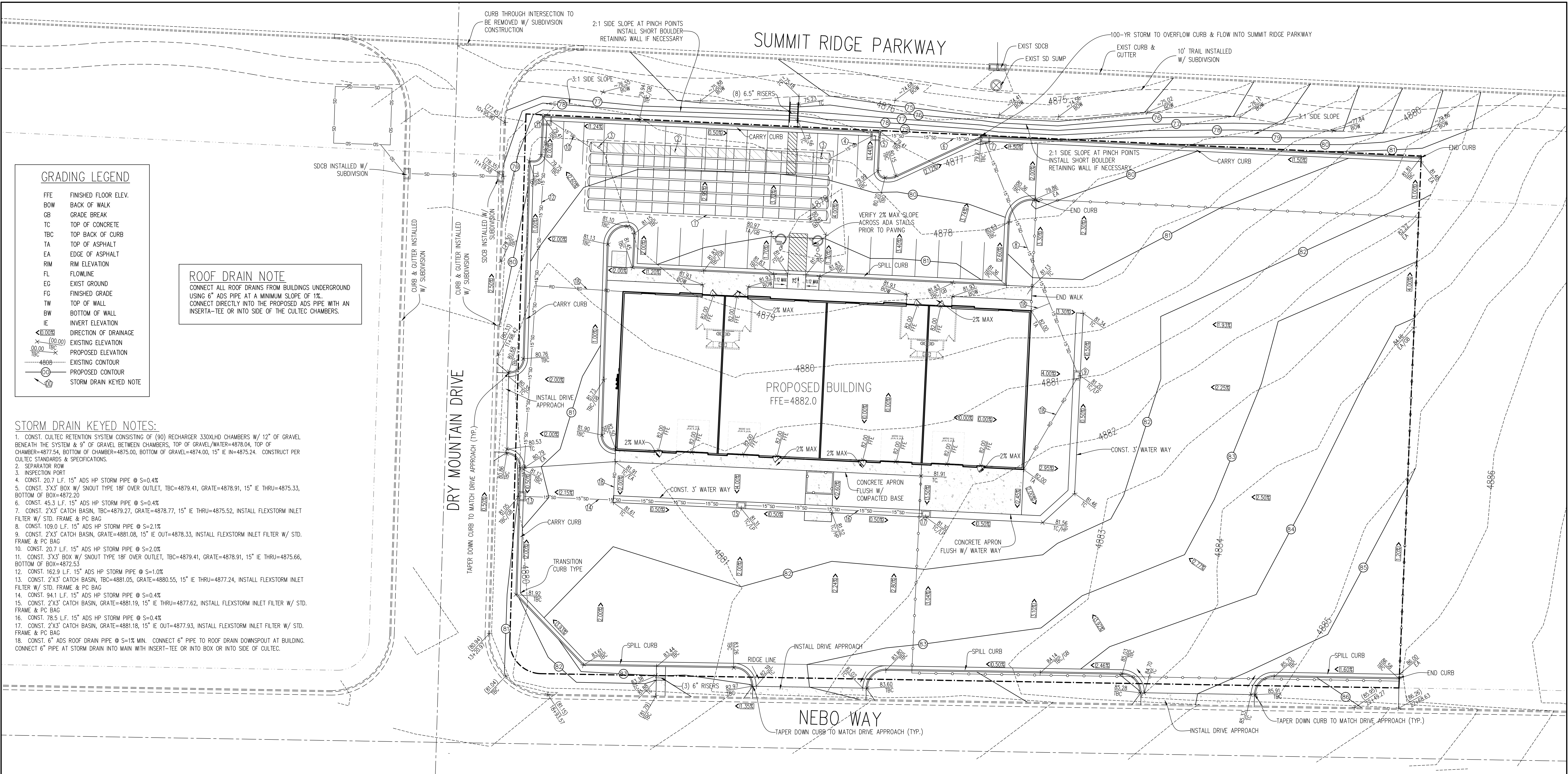
CC CALLAWAY
SANTAQUIN 77 N. SUMMIT RIDGE PKWY UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

Scale: 1"=20'
Date: 03/13/24
C3



SUMMIT RIDGE PARKWAY



GRADING LEGEND

- FFE FINISHED FLOOR ELEV.
- BOW BACK OF WALK
- GB GRADE BREAK
- TC TOP OF CONCRETE
- TBC TOP BACK OF CURB
- TA TOP OF ASPHALT
- EA EDGE OF ASPHALT
- RM RIM ELEVATION
- FL FLOWLINE
- EG EXIST GROUND
- FG FINISHED GRADE
- TW TOP OF WALL
- BW BOTTOM OF WALL
- IE INVERT ELEVATION
- $\leftarrow \frac{0.00\%}{100.00}$ DIRECTION OF DRAINAGE
- $\frac{00.00}{100.00}$ EXISTING ELEVATION
- $\frac{00.00}{100.00}$ PROPOSED ELEVATION
- 4800 EXISTING CONTOUR
- 4800 PROPOSED CONTOUR
- \rightarrow STORM DRAIN KEYED NOTE

ROOF DRAIN NOTE
 CONNECT ALL ROOF DRAINS FROM BUILDINGS UNDERGROUND USING 6" ADS PIPE AT A MINIMUM SLOPE OF 1%. CONNECT DIRECTLY INTO THE PROPOSED ADS PIPE WITH AN INSERTA-TEE OR INTO SIDE OF THE CULTEC CHAMBERS.

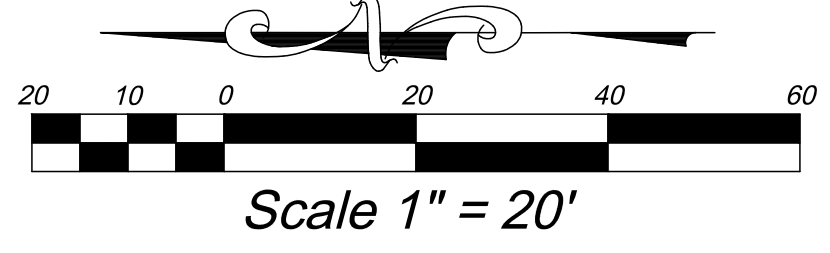
STORM DRAIN KEYED NOTES:

1. CONST. CULTEC RETENTION SYSTEM CONSISTING OF (90) RECHARGER 330XLHD CHAMBERS W/ 12" OF GRAVEL BENEATH THE SYSTEM & 9" OF GRAVEL BETWEEN CHAMBERS, TOP OF GRAVEL/WATER=4878.04, TOP OF CHAMBER=4877.54, BOTTOM OF CHAMBER=4875.00, BOTTOM OF GRAVEL=4874.00, 15" IE IN=4875.24. CONSTRUCT PER CULTEC STANDARDS & SPECIFICATIONS.
2. SEPARATOR ROW
3. INSPECTION PORT
4. CONST. 20.7 L.F. 15" ADS HP STORM PIPE @ S=0.4%
5. CONST. 3'X3' BOX W/ SNOOT TYPE 18F OVER OUTLET, TBC=4879.41, GRATE=4878.91, 15" IE THRU=4875.33, BOTTOM OF BOX=4872.20
6. CONST. 45.3 L.F. 15" ADS HP STORM PIPE @ S=0.4%
7. CONST. 2'X3' CATCH BASIN, TBC=4879.27, GRATE=4878.77, 15" IE THRU=4875.52, INSTALL FLEXSTORM INLET FILTER W/ STD. FRAME & PC BAG
8. CONST. 109.0 L.F. 15" ADS HP STORM PIPE @ S=2.1%
9. CONST. 2'X3' CATCH BASIN, GRATE=4881.08, 15" IE OUT=4878.33, INSTALL FLEXSTORM INLET FILTER W/ STD. FRAME & PC BAG
10. CONST. 20.7 L.F. 15" ADS HP STORM PIPE @ S=2.0%
11. CONST. 3'X3' BOX W/ SNOOT TYPE 18F OVER OUTLET, TBC=4879.41, GRATE=4878.91, 15" IE THRU=4875.66, BOTTOM OF BOX=4872.53
12. CONST. 162.9 L.F. 15" ADS HP STORM PIPE @ S=1.0%
13. CONST. 2'X3' CATCH BASIN, TBC=4881.05, GRATE=4880.55, 15" IE THRU=4877.24, INSTALL FLEXSTORM INLET FILTER W/ STD. FRAME & PC BAG
14. CONST. 94.1 L.F. 15" ADS HP STORM PIPE @ S=0.4%
15. CONST. 2'X3' CATCH BASIN, GRATE=4881.19, 15" IE THRU=4877.62, INSTALL FLEXSTORM INLET FILTER W/ STD. FRAME & PC BAG
16. CONST. 78.5 L.F. 15" ADS HP STORM PIPE @ S=0.4%
17. CONST. 2'X3' CATCH BASIN, GRATE=4881.18, 15" IE OUT=4877.93, INSTALL FLEXSTORM INLET FILTER W/ STD. FRAME & PC BAG
18. CONST. 6" ADS ROOF DRAIN PIPE @ S=1% MIN. CONNECT 6" PIPE TO ROOF DRAIN DOWNSPOUT AT BUILDING. CONNECT 6" PIPE AT STORM DRAIN INTO MAIN WITH INSERT-TEE OR INTO BOX OR INTO SIDE OF CULTEC.

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3. SEE SEPARATE REPORT FOR STORM DRAIN CALCULATIONS.
4. ALL ROOF DRAINS SHALL DISCHARGE ONTO SITE AND INTO PRIVATE STORM DRAIN SYSTEM.

PAVEMENT DESIGN
 4" HOT MIX ASPHALT (1/2 INCH PG 64-34)
 6" UNTREATED BASE COARSE
 12" GRANULAR BORROW
 *SEE GEOTECHNICAL STUDY PREPARED BY RB&G PREPARED ON 3/13/23 & ADDENDUM PREPARED ON 5/10/23 FOR FULL DISCUSSION ON PAVEMENT DESIGN



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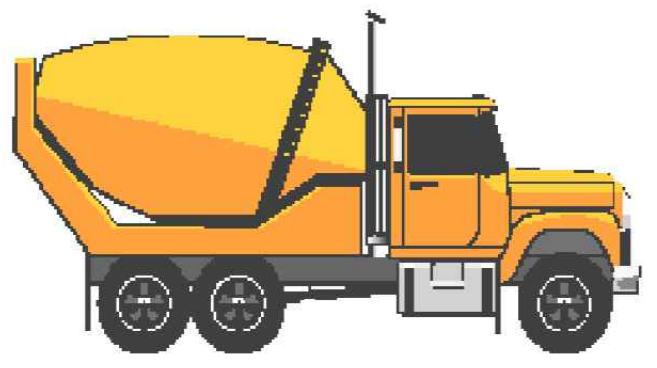
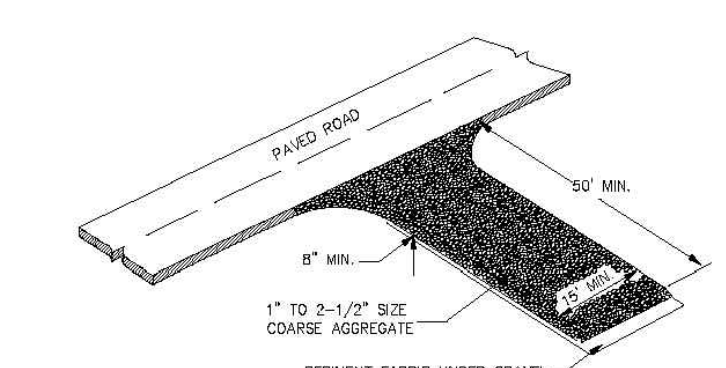
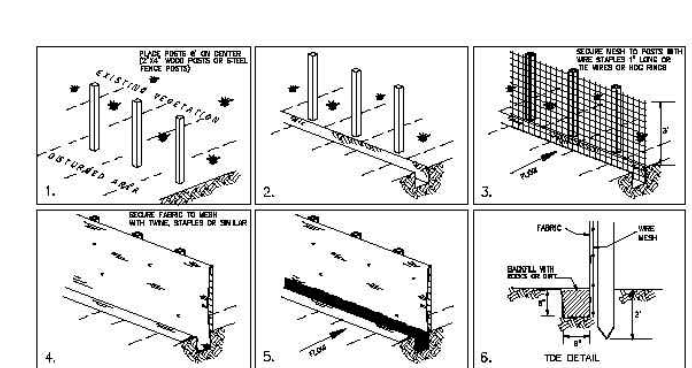
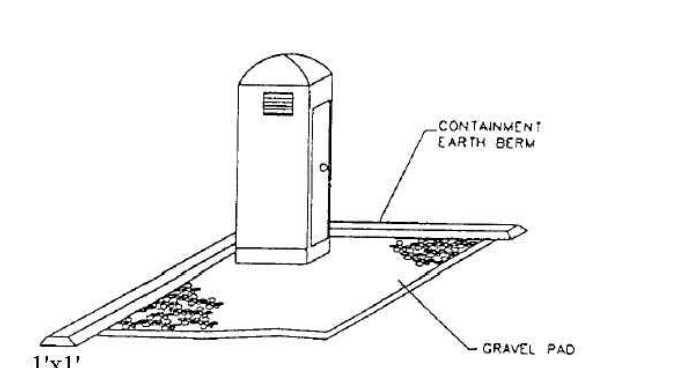
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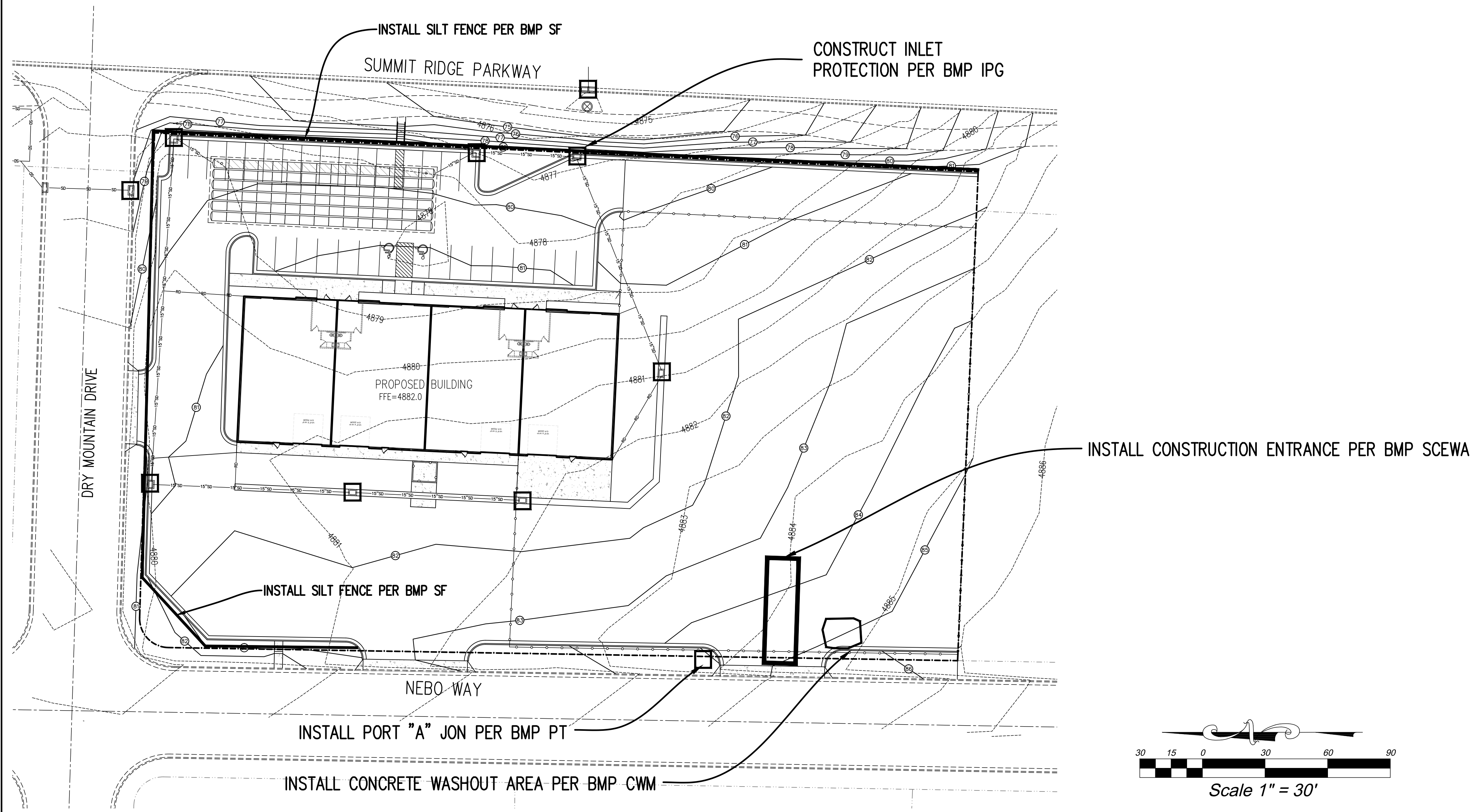
CC CALLAWAY
 SANTAQUIN | 77 N. SUMMIT RIDGE PKWY | UTAH

Drawn by: D.W.P.
 Designed by: D.W.P.
 Checked by: D.W.P.

GRADING & DRAINAGE PLAN

Scale: 1"=20"
 Date: 03/13/24
 C4

BMP: Concrete Waste Management	CWM	BMP: Stabilized Construction Entrance and Wash Area	SCEWA	BMP: Silt Fence	SF	BMP: Inlet Protection - Gravel	IPG	BMP: Portable Toilets	PT
 <p>OBJECTIVES</p> <ul style="list-style-type: none"> Housekeeping Practices Contain Waste Minimize Disturbed Areas Stabilize Disturbed Areas Protect Slopes/Channels Control Site Perimeter Control Internal Erosion <p>DESCRIPTION: Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.</p> <p>APPLICATIONS: This technique is applicable to all types of sites.</p> <p>INSTALLATION/APPLICATION CRITERIA:</p> <ul style="list-style-type: none"> Store dry and wet materials under cover, away from drainage areas. Avoid mixing excess amounts of fresh concrete or cement on-site. Perform washout of concrete trucks off-site or in designated areas only. Do not wash out concrete trucks into storm drains, open ditches, streets, or streams. Do not allow excess concrete to be dumped on-site, except in designated areas. When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.) Train employees and subcontractors in proper concrete waste management. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> Off-site washout of concrete wastes may not always be possible. <p>MAINTENANCE:</p> <ul style="list-style-type: none"> Inspect subcontractors to ensure that concrete wastes are being properly managed. If using a temporary pit, dispose hardened concrete on a regular basis. 	<p>OBJECTIVES</p> <ul style="list-style-type: none"> Housekeeping Practices Contain Waste Minimize Disturbed Areas Stabilize Disturbed Areas Protect Slopes/Channels Control Site Perimeter Control Internal Erosion <p>DESCRIPTION: A stabilized pad of crushed stone located where construction traffic enters or leaves the site from or to paved surface. The area can be used to spray off vehicles before they leave the site.</p> <p>APPLICATIONS: At any point of ingress or egress at a construction site where adjacent traveled way is paved. Generally applies to sites over 2 acres unless special conditions exist.</p> <p>INSTALLATION/APPLICATION CRITERIA:</p> <ul style="list-style-type: none"> Clear and grub area and grade to provide maximum slope of 2%. Compact subgrade and place filter fabric if desired (recommended for entrances to remain for more than 3 months). Place coarse aggregate, 1 to 2-1/2 inches in size, to a minimum depth of 8 inches. Provide water to the area that can be used to spray off vehicles as needed to prevent the tracking of mud off of the construction site. This may not be needed during dry periods of work, but is needed when construction is proceeding under wet conditions. Provide berming as needed to prevent sediment laden wash water from entering storm water facilities or other water bodies, or leaving the site. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> Requires periodic top dressing with additional stones. Should be used in conjunction with street sweeping on adjacent public right-of-way. Must be situated such that waste water does not run off site. <p>MAINTENANCE:</p> <ul style="list-style-type: none"> Inspect daily for loss of gravel or sediment buildup. Inspect adjacent roadway for sediment deposit and clean by shoveling and sweeping. Repair entrance and replace gravel as required to maintain control in good working condition. Expand stabilized area as required to accommodate traffic and prevent erosion of driveways. 	 <p>OBJECTIVES</p> <ul style="list-style-type: none"> Housekeeping Practices Contain Waste Minimize Disturbed Areas Stabilize Disturbed Areas Protect Slopes/Channels Control Site Perimeter Control Internal Erosion <p>DESCRIPTION: A temporary sediment barrier consisting of entrenched filter fabric stretched across and secured to supporting posts.</p> <p>APPLICATIONS:</p> <ul style="list-style-type: none"> Perimeter control; place barrier at downgradient limits of disturbance Sediment barrier; place barrier at toe of slope or soil stockpile Protection of existing waterways; place barrier near top of stream bank Inlet protection; place fence surrounding catchbasins <p>INSTALLATION/APPLICATION CRITERIA:</p> <ul style="list-style-type: none"> Place posts 6 feet apart on center along contour (or use preassembled unit) and drive 2 feet minimum into ground. Excavate an anchor trench immediately upgradient of posts. Secure wire mesh (14 gage min. With 6 inch openings) to upslope side of posts. Attach with heavy duty 1 inch long wire staples, tie wires or hog rings. Cut fabric to required width, unroll along length of barrier and drape over barrier. Secure fabric to mesh with twine, staples, or similar, with trailing edge extending into anchor trench. Backfill trench over filter fabric to anchor. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> Recommended maximum drainage area of 0.5 acre per 100 feet of fence Recommended maximum upgradient slope length of 150 feet Recommended maximum uphill grade of 2:1 (50%) Recommended maximum flow rate of 0.5 cfs Fonding should not be allowed behind fence <p>MAINTENANCE:</p> <ul style="list-style-type: none"> Inspect immediately after any rainfall and at least daily during prolonged rainfall. Look for runoff bypassing ends of barriers or undercutting barriers. Repair or replace damaged areas of the barrier and remove accumulated sediment. Re-anchor fence as necessary to prevent shortcutting. Remove accumulated sediment when it reaches 1/2 the height of the fence. 	 <p>OBJECTIVES</p> <ul style="list-style-type: none"> Housekeeping Practices Contain Waste Minimize Disturbed Areas Stabilize Disturbed Areas Protect Slopes/Channels Control Site Perimeter Control Internal Erosion <p>DESCRIPTION: Placement of gravel filter over inlet to storm drain to filter storm water runoff.</p> <p>APPLICATION: Construct at inlets in paved or unpaved areas where upgradient area is to be disturbed by construction activities.</p> <p>INSTALLATION/APPLICATION CRITERIA:</p> <ul style="list-style-type: none"> Place wire mesh (with 1/2 inch openings) over the inlet grate extending one foot past the grate in all directions. Place filter fabric over the mesh. Filter fabric should be selected based on soil type. Place graded gravel, to a minimum depth of 12-inches, over the filter fabric and extending 18-inches past the grate in all directions. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> Recommended for maximum drainage area of one acre. Excess flows may bypass the inlet requiring down gradient controls. Fonding will occur at inlet. <p>MAINTENANCE:</p> <ul style="list-style-type: none"> Inspect inlet protection after every large storm event and at a minimum of once monthly. Remove sediment accumulated when it reaches 4-inches in depth. Replace filter fabric and clean or replace gravel if logging is apparent. 	 <p>OBJECTIVES</p> <ul style="list-style-type: none"> Housekeeping Practices Contain Waste Minimize Disturbed Areas Stabilize Disturbed Areas Protect Slopes/Channels Control Site Perimeter Control Internal Erosion <p>DESCRIPTION: Temporary on-site sanitary facilities for construction personnel.</p> <p>APPLICATION: All sites with no permanent sanitary facilities or where permanent facility is too far from activities.</p> <p>INSTALLATION/APPLICATION CRITERIA:</p> <ul style="list-style-type: none"> Locate portable toilets in convenient locations throughout the site. Prepare level, gravel surface and provide clear access to the toilets for servicing and for onsite personnel. Construct earth berm perimeter (See Earth Berm Barrier Information Sheet). Stake toilets to prevent them from tipping. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> No limitations. <p>MAINTENANCE:</p> <ul style="list-style-type: none"> Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection. Regular waste collection should be arranged with licensed service. All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval. 					
<p>ADAPTED FROM: Salt Lake County BMP Fact Sheet</p> <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Sediment Nutrients Toxic Materials Oil & Grease Floatable Materials Other Waste <p>IMPLEMENTATION REQUIREMENTS</p> <ul style="list-style-type: none"> Capital Costs O&M Costs Maintenance Training <p>■ High ■ Medium □ Low</p>	<p>ADAPTED FROM: Salt Lake County BMP Fact Sheet</p> <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Sediment Nutrients Toxic Materials Oil & Grease Floatable Materials Other Waste <p>IMPLEMENTATION REQUIREMENTS</p> <ul style="list-style-type: none"> Capital Costs O&M Costs Maintenance Training <p>■ High ■ Medium □ Low</p>	<p>ADAPTED FROM: Salt Lake County BMP Fact Sheet</p> <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Sediment Nutrients Toxic Materials Oil & Grease Floatable Materials Other Waste <p>IMPLEMENTATION REQUIREMENTS</p> <ul style="list-style-type: none"> Capital Costs O&M Costs Maintenance Training <p>■ High ■ Medium □ Low</p>	<p>ADAPTED FROM: Salt Lake County BMP Fact Sheet</p> <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Sediment Nutrients Toxic Materials Oil & Grease Floatable Materials Other Waste <p>IMPLEMENTATION REQUIREMENTS</p> <ul style="list-style-type: none"> Capital Costs O&M Costs Maintenance Training <p>■ High ■ Medium □ Low</p>	<p>ADAPTED FROM: Salt Lake County BMP Fact Sheet</p> <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Sediment Nutrients Toxic Materials Oil & Grease Floatable Materials Other Waste <p>IMPLEMENTATION REQUIREMENTS</p> <ul style="list-style-type: none"> Capital Costs O&M Costs Maintenance Training <p>■ High ■ Medium □ Low</p>	<p>ADAPTED FROM: Salt Lake County BMP Fact Sheet</p> <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Sediment Nutrients Toxic Materials Oil & Grease Floatable Materials Other Waste <p>IMPLEMENTATION REQUIREMENTS</p> <ul style="list-style-type: none"> Capital Costs O&M Costs Maintenance Training <p>■ High ■ Medium □ Low</p>				



EROSION CONTROL PLAN NOTES:

- CONSTRUCT A SILT FENCE AS SHOWN ON PLAN. SEE BMP SF.
- INSTALL A CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN PRIOR TO ANY GRADING ON THE SITE. SEE BMP SCEWA
- INSTALL CONCRETE WASH OUT AREA. SEE BMP CWM
- INSTALL PORT "A" JON. SEE BMP PT
- CONSTRUCT STORM DRAIN FACILITIES AND INSTALL INLET PROTECTION AFTER INSTALLATION. SEE BMP IPG.
- CONTRACTOR WILL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF BMP'S DURING CONSTRUCTION.
- CONTRACTOR TO WATER SITE AT LEAST WEEKLY OR MORE FREQUENTLY AS NEEDED TO CONTROL DUST POLLUTION.

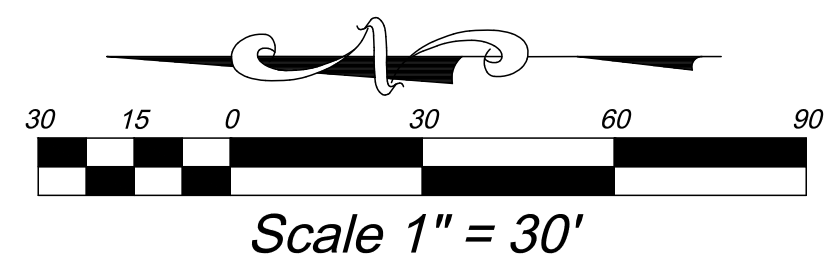
SWPPP BOOKLET NOTE:
CONTRACTOR IS RESPONSIBLE TO PREPARE AND SUBMIT A COMPLETE STORM WATER PREVENTION PLAN BOOKLET WITH FULL DETAILS BASED ON THE EPA SWPPP STANDARD TEMPLATE. THIS BOOKLET INCLUDES A COPY OF THE NOTICE OF INTENT AND AN ACKNOWLEDGEMENT LETTER OBTAINED FROM STATE AFTER APPLYING FOR AN NOI PERMIT.

GENERAL NOTES:

- THE DEVELOPER AND THE GENERAL CONTRACTOR UNDERSTAND THAT IT IS HIS/HER RESPONSIBILITY TO ENSURE THAT ALL IMPROVEMENTS INSTALLED WITH THIS DEVELOPMENT ARE CONSTRUCTED IN FULL COMPLIANCE WITH ALL STATE AND SANTAQUIN CITY CODES, ORDINANCES AND STANDARDS. THESE PLANS ARE NOT ALL INCLUSIVE OF ALL MINIMUM CODES, ORDINANCES AND STANDARDS. THIS FACT DOES NOT RELIEVE THE DEVELOPER OR GENERAL CONTRACTOR FROM FULL COMPLIANCE WITH ALL MINIMUM STATE AND SANTAQUIN CITY CODES, ORDINANCES AND STANDARDS.
- ALL RECOMMENDATIONS MADE IN A PERTINENT GEOTECHNICAL REPORT/STUDY SHALL BE FOLLOWED EXPLICITLY DURING CONSTRUCTION OF BUILDINGS AND SITE IMPROVEMENTS.



REVISIONS		
Rev.	Date	Description



Developer: Rob Weber
Phone: 801-360-1039

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

CC CALLAWAY
SANTAQUIN 77 N. SUMMIT RIDGE PKWY UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

EROSION CONTROL PLAN

Scale: 1"=30'
Date: 03/13/24
C5

CULINARY WATER SERVICE CONNECTION

W1

SANTAQUIN CITY
275 WEST MAIN STREET

ADOPTED DATE: 19 - OCT - 16

PRESSURE IRRIGATION SERVICE LATERAL

PI1

SANTAQUIN CITY
275 WEST MAIN STREET

ADOPTED DATE: 19 - OCT - 16

PRESSURIZED IRRIGATION METER BOX

PI2

SANTAQUIN CITY
275 WEST MAIN STREET

ADOPTED DATE: 19 - OCT - 16

CURB INLET BOX ASSEMBLY

SD1

SANTAQUIN CITY
275 WEST MAIN STREET

ADOPTED DATE: 19 - OCT - 16

SIDEWALK DETAILS

CG5

SANTAQUIN CITY
275 WEST MAIN STREET

ADOPTED DATE: 19 - OCT - 16

DRIVEWAY APPROACH WITH PARK STRIP

CG3

SANTAQUIN CITY
275 WEST MAIN STREET

ADOPTED DATE: 19 - OCT - 16

ADA VAN SIGN DETAIL

REVISIONS

Rev.	Date	Description

Developer: Rob Weber
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CC CALLAWAY
SANTAQUIN 77 N. SUMMIT RIDGE PKWY UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

Scale: NTS
Date: 03/13/24
C6

DETAIL SHEET

CULTEC RECHARGER 330XLHD PRODUCT SPECIFICATIONS

GENERAL:
CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

- THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT, USA (203-775-4416 OR 1-800-428-5832).
- THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
- THE CHAMBER SHALL BE ARCHED IN SHAPE.
- THE CHAMBER SHALL BE OPEN-BOTTOMED.
- THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS.
- THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 30.2 INCHES (773 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m).
- MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 24 INCHES (600 mm) HOPE.
- THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS OF EACH SIDE PORTAL SHALL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 11.75 INCHES (298 mm).
- THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24 INCHES (614 mm) LONG.
- THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER SHALL BE 7.469 FT³ (212 m³) WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 330XLHD SHALL BE 52.213 FT³ (1478 m³ UNIT) WITHOUT STONE.
- THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT³ (25.8 m³) WITHOUT STONE.
- THE RECHARGER 330XLHD CHAMBER SHALL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNITS CORE TO PROMOTE LATERAL CONVEYANCE OF WATERS.
- THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 CORRUGATIONS.
- THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
- THE RECHARGER 330XLHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
- THE RECHARGER 330XLHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
- THE RECHARGER 330XLHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
- THE RECHARGER 330XLHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
- THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 330XLHD AND ACT AS CROSS FEED CONNECTIONS.
- CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
- THE CHAMBER SHALL HAVE A 6 INCH (152 mm) DIAMETER RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
- THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
- THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.
- THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF ASTM PS-2019, INCLUDING RESISTANCE TO AASH-10-H AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.
- THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS OF NSRI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND INFILTRATION.
- MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m).
- THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL:
CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 330XLHD STORMWATER CHAMBERS.

CHAMBER PARAMETERS

- THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832).
- THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
- THE CHAMBER SHALL BE ARCHED IN SHAPE.
- THE CHAMBER SHALL BE OPEN-BOTTOMED.
- THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24 INCHES (614 mm) LONG.
- THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT³ (25.8 m³) WITHOUT STONE.
- THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS.
- THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
- THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE
CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTORS® AND RECHARGERS® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

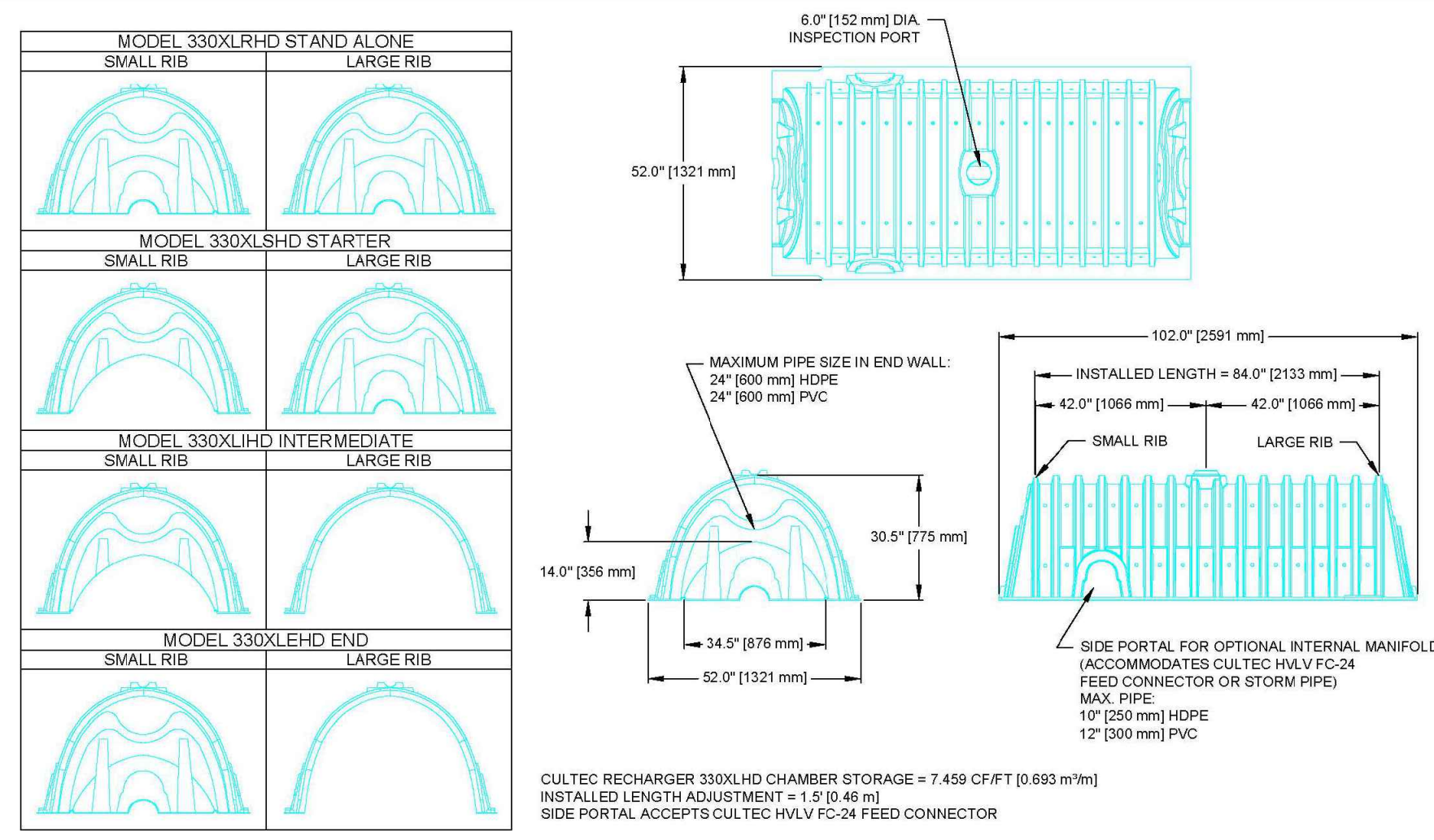
GEOTEXTILE PARAMETERS

- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832).
- THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
- THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M²).
- THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SQ) PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

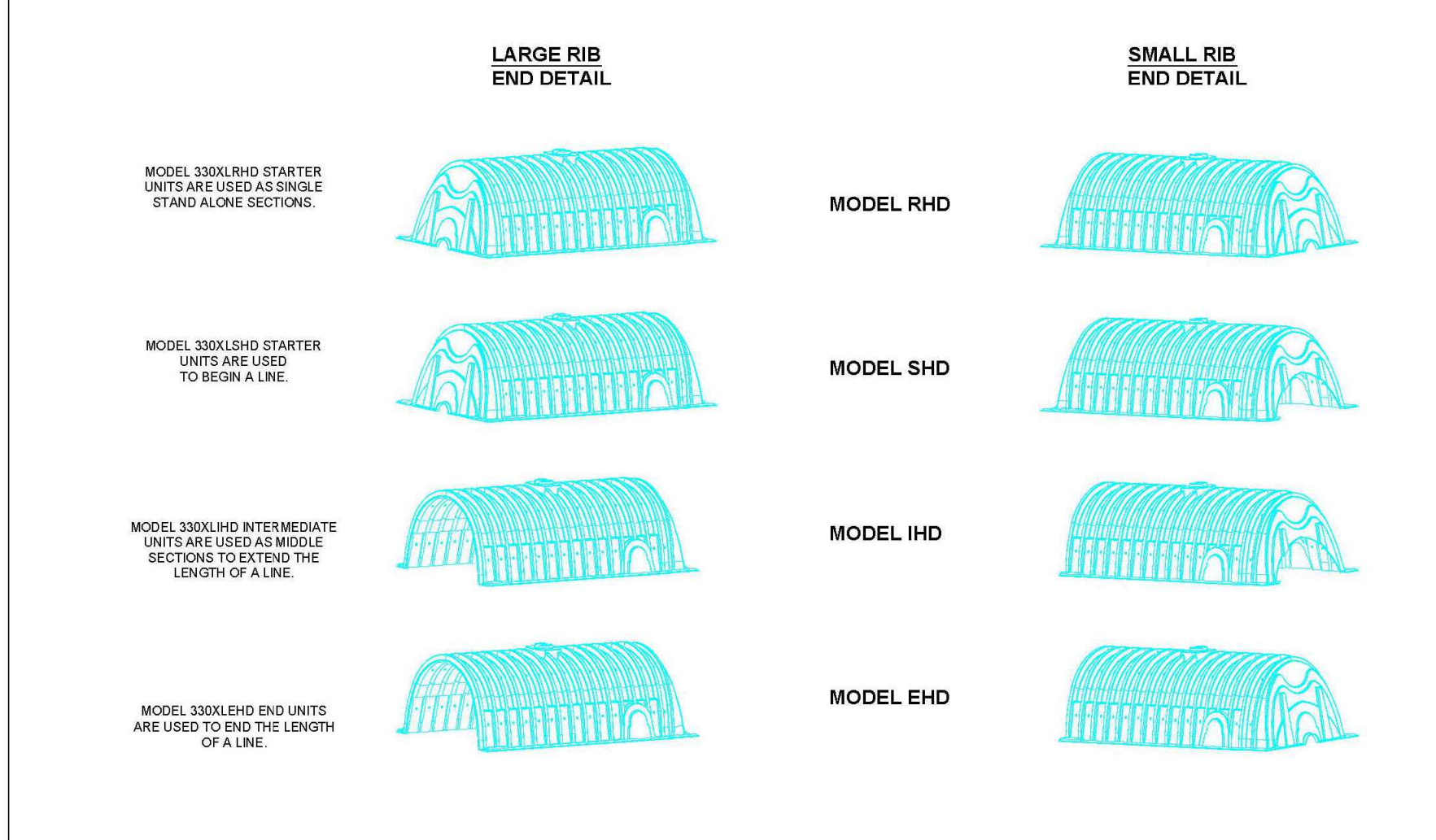
CULTEC NO. 4800™ WOVEN GEOTEXTILE
CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS

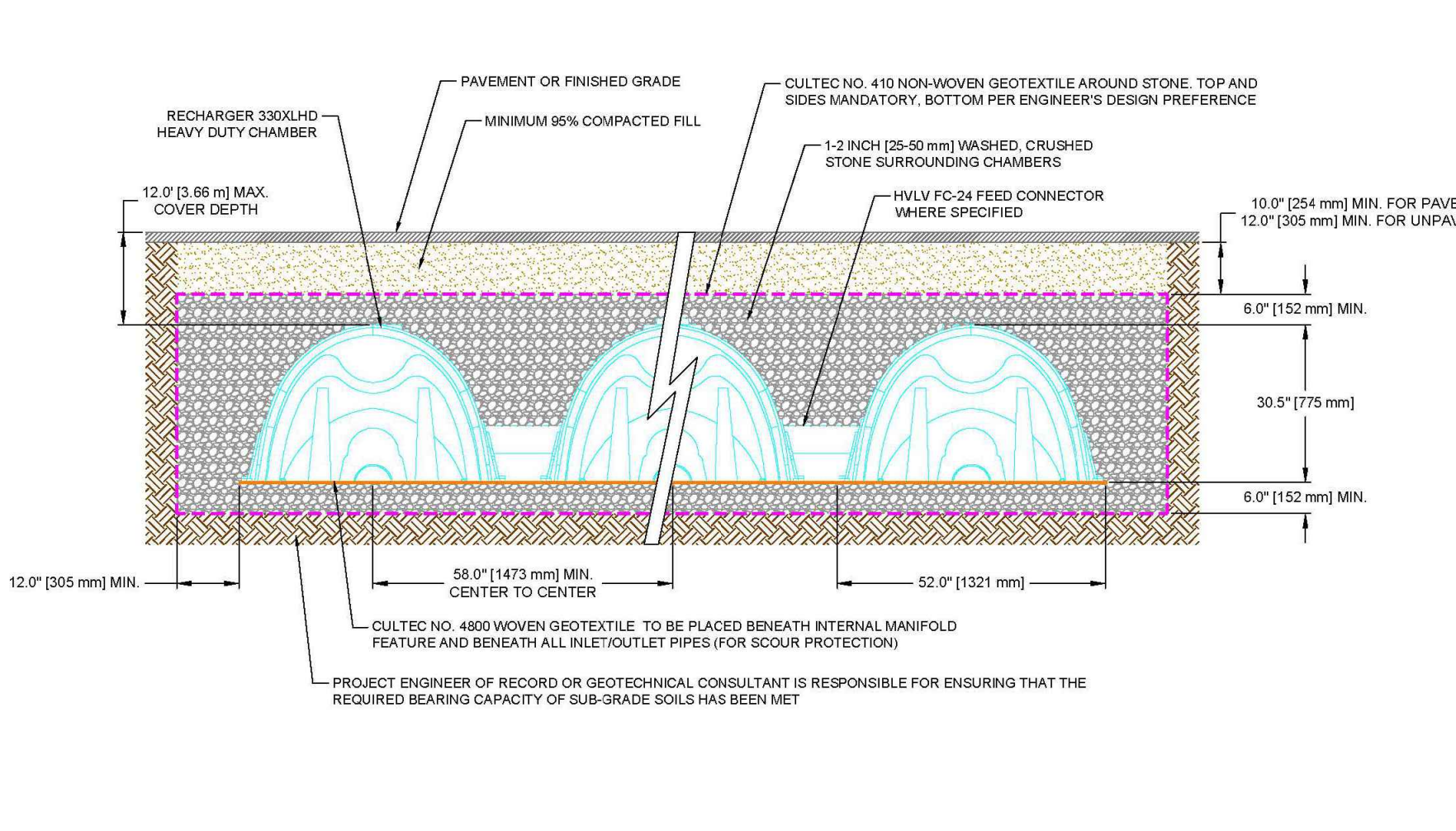
- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832).
- THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
- THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,440 X 2,448 N) PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4999 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 900 X 1,096 LBS/FT (14 X 16 KN/M) PER ASTM D4936 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2,740 LBS/FT (40 X 40 KN/M) PER ASTM D4999 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4999 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 U.S. STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT² (470 LPH/M²) PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.



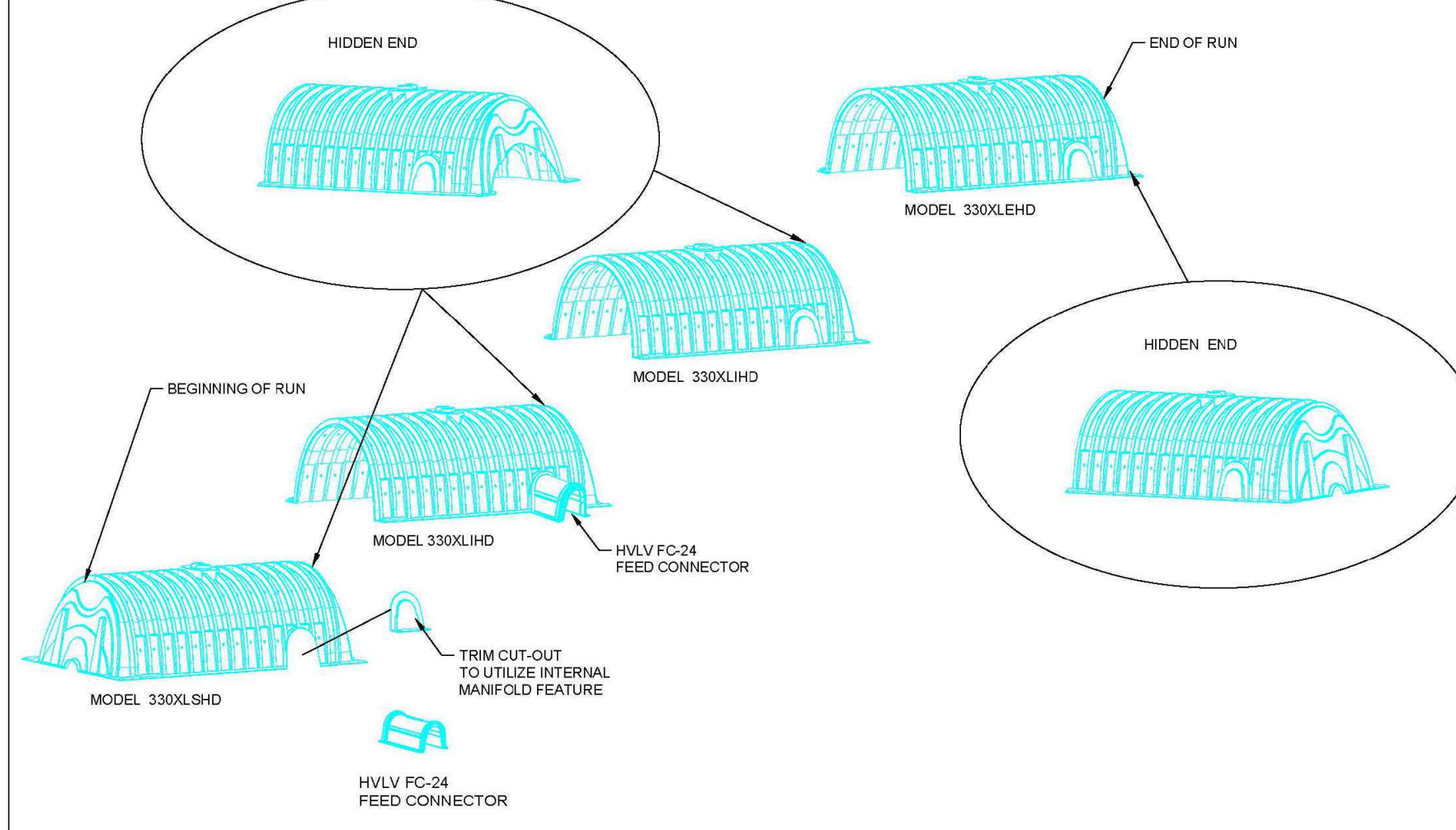
CULTEC RECHARGER 330XLHD HEAVY DUTY THREE VIEW



CULTEC RECHARGER 330XLHD HEAVY DUTY END DETAIL INFORMATION

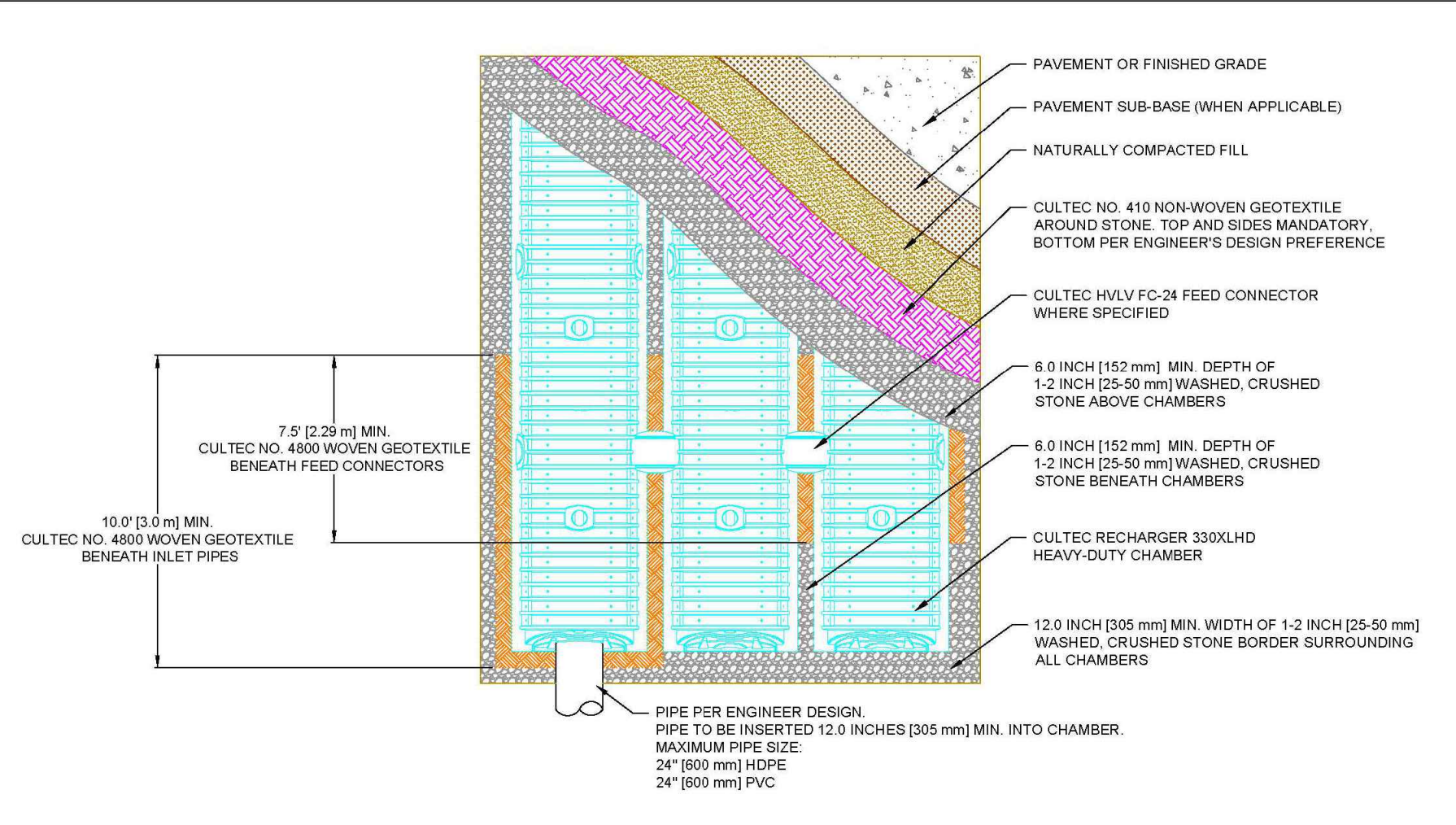


CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION



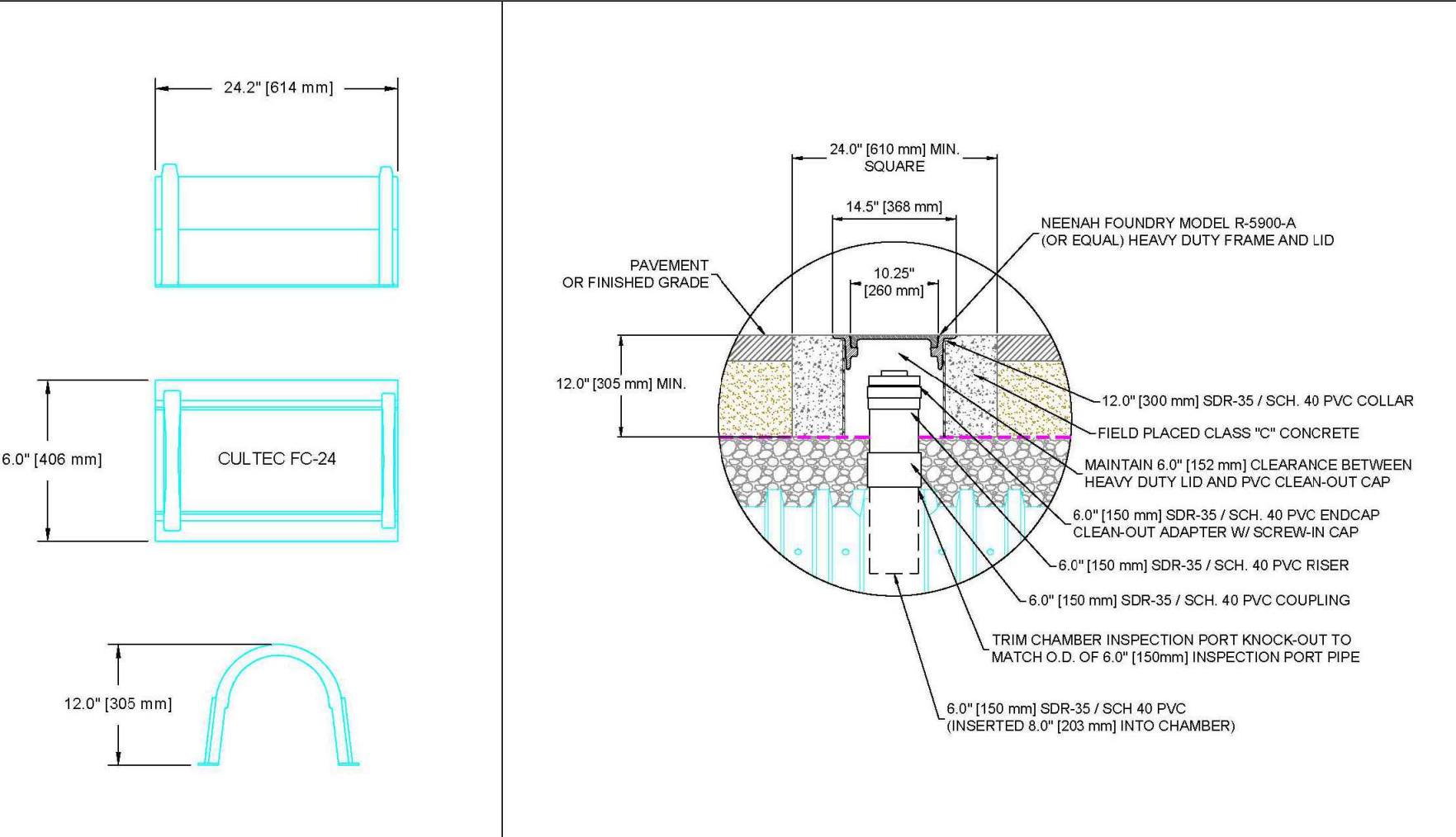
CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL INTERLOCK

GENERAL NOTES



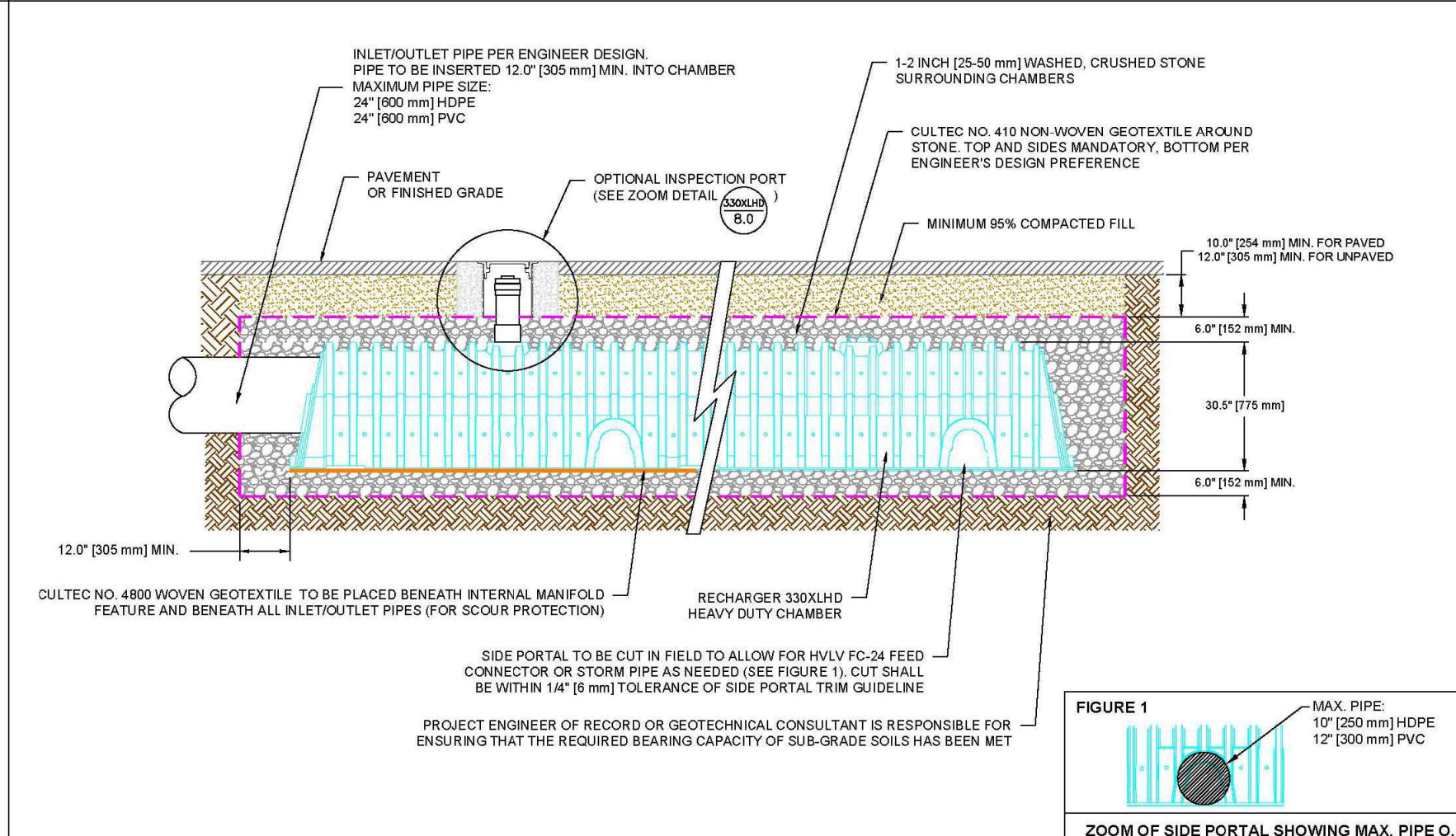
CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW

CULTEC HVLV FC-24 FEED CONNECTOR THREE VIEW



CULTEC HVLV FC-24 FEED CONNECTOR THREE VIEW

CULTEC INTERNAL MANIFOLD- OPTIONAL INSPECTION PORT DETAIL



CULTEC INTERNAL MANIFOLD- OPTIONAL INSPECTION PORT DETAIL

CULTEC, Inc.
Subsurface Stormwater Management Systems
P.O. Box 280
878 Federal Road
Brookfield, CT 06804
www.cultec.com

PH: (203) 775-4416
FX: (800) 4-CULTEC
PH: (203) 775-1462
tech@cultec.com

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

**RECHARGER 330XLHD
DETAIL SHEET
TRAFFIC APPLICATION**

CULTEC STORMWATER CHAMBER		
PROJECT NO:	DATE:	2019
DESIGNED BY: CULTEC, INC	CHECKED BY:	TECH
SCALE:	N.T.S.	SHEET NO: 1 OF 1

* SEE KEYED NOTES ON C4 FOR CULTECH SYSTEM DESIGN. SEE SEPARATE STORM DRAIN REPORT.

BENCH MARK	REVISIONS		
	Rev.	Date	Description
NORTH QUARTER CORNER, SECTION 3, TOWNSHIP 10 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN ELEVATION = 4851.13			

Developer: Rob Weber
Phone: 801-360-1039

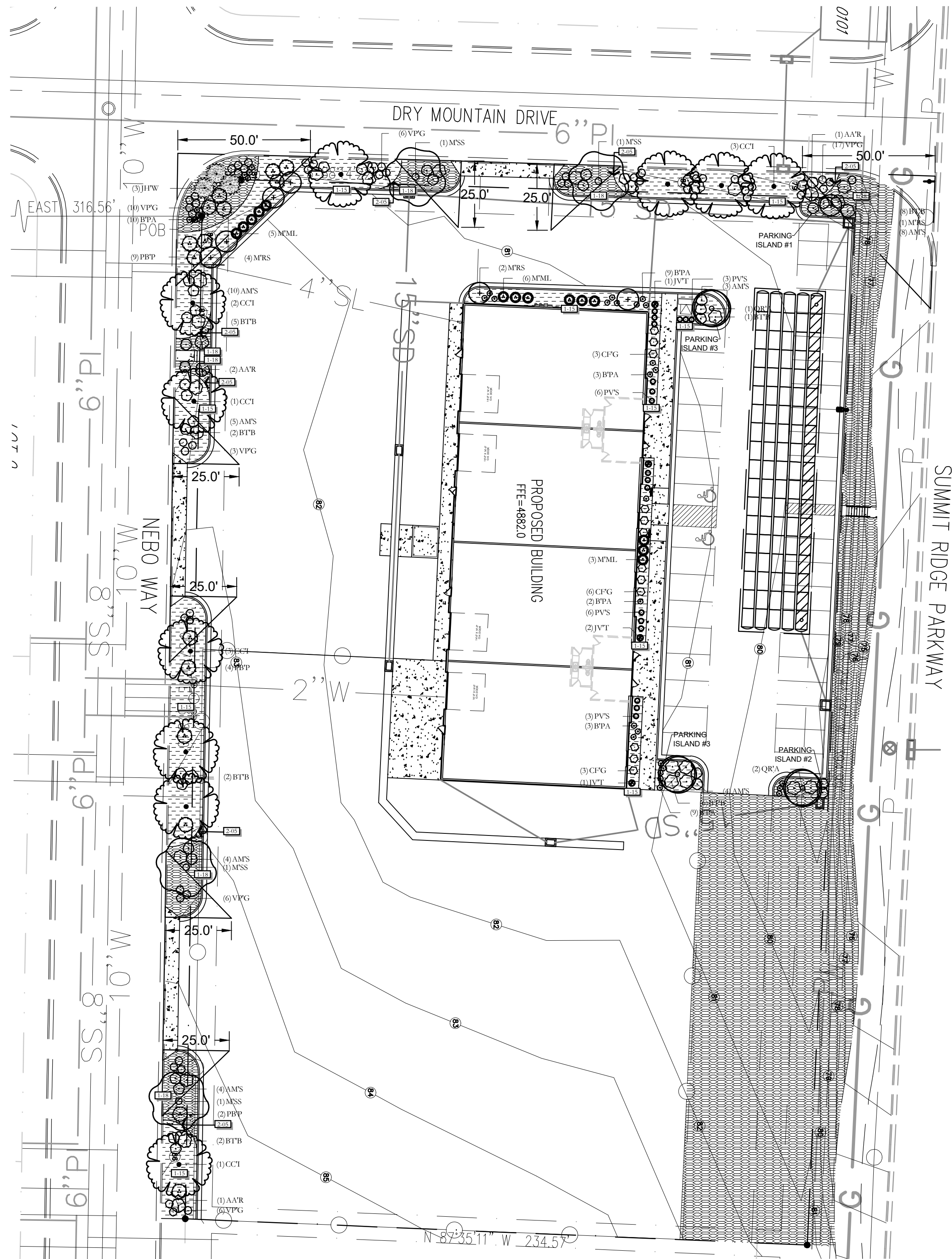
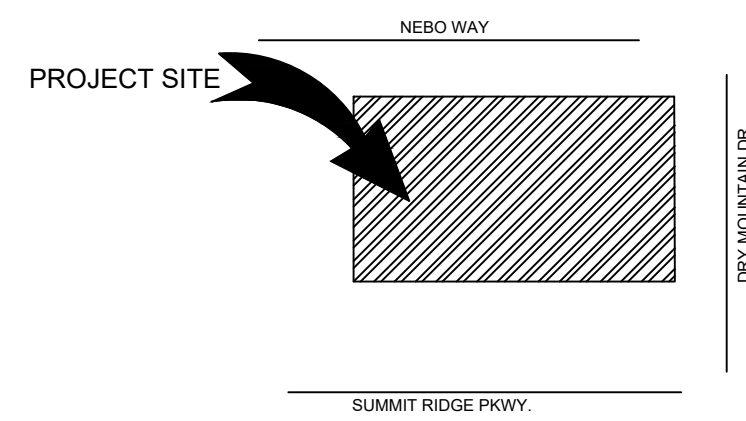
EXCEL ENGINEERING
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CC CALLAWAY
SANTAQUIN 77 N. SUMMIT RIDGE PKWY UTAH

Scale: NTS
Date: 03/13/24
C7

DETAIL SHEET

VICINITY MAP



SITE MATERIALS LEGEND

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
[Symbol]	1" MINUS GREY CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 3" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	5,751 sf
[Symbol]	2-4" TAN CRUSHED ROCK. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 4" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	15,028 sf
SYMBOL	2 HARDSCAPE DESCRIPTION	QTY
[Symbol]	5" DEEP STEEL EDGING - INSTALL PER MANUFACTURER SPECIFICATION.	176 lf

PLANT LEGEND

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CONIFERS						
[Symbol]	JVT	4	Juniperus virginiana 'Taylor' Taylor Eastern Redcedar Tt2; low water; 30' x 3'; sun, Z4; Utah Lake water tolerant	B & B		6'
DECIDUOUS TREES						
[Symbol]	CCI	10	Crataegus crus-gali inermis Thornless Cockspur Hawthorn Td4; 25x25; AV 314; full to part sun; z3; Utah Lake water tolerant	B & B		2"Cal
[Symbol]	MRS	7	Malus x 'Raspberry Spear' Raspberry Spear Crabapple low; 20x8; sun; z4; Utah Lake water tolerant	B & B		2"Cal
[Symbol]	MSS	4	Malus x 'Spring Snow' Spring Snow Crab Apple low; 25x22; sun; z4; Utah Lake water tolerant	B & B		2"Cal
[Symbol]	QR'A	3	Quercus robur x alba 'JFS-KW1QX' TM Street Spire Oak Td4; 45x14; AV 176; sun; z4	B & B		2"Cal

SYMBOL CODE QTY BOTANICAL / COMMON NAME CONT

DECIDUOUS SHRUBS

[Symbol]	AA'R	4	Amelanchier alnifolia 'Regent' Regent Serviceberry Sd2; 5x5; AV 50; sun to part shade; z2; Utah Lake water tolerant	5 gal
[Symbol]	AMS	38	Aronia melanocarpa 'SMNAMPEN' Low Scape Snowfire™ Black Chokeberry Moderate water; 3-4' x 3-4'; sun to part shade; z3;	5 gal
[Symbol]	BPA	36	Buddleja x 'SMNBDL' Pugster Amethyst Dwarf Butterfly Bush Sd3; 2x2; AV 12.5; sun; z5; Utah Lake water tolerant	5 gal
[Symbol]	BT'B	26	Berberis thunbergii 'BallElla' Lambusco™ Japanese Barberry	5 gal
[Symbol]	CFG	12	Caragana frutex 'Globosa' Globe Peashrub Sd1; 5x5; AV28; sun to part sun; z2; Utah Lake water tolerant	5 gal
[Symbol]	PB'P	15	Prunus besseyi 'P011S' 'Pawnee Buttes' Pawnee Buttes Sand Cherry Sd1; 1.5 x 6; AV19.5; sun; z4;	5 gal

EVERGREEN SHRUBS

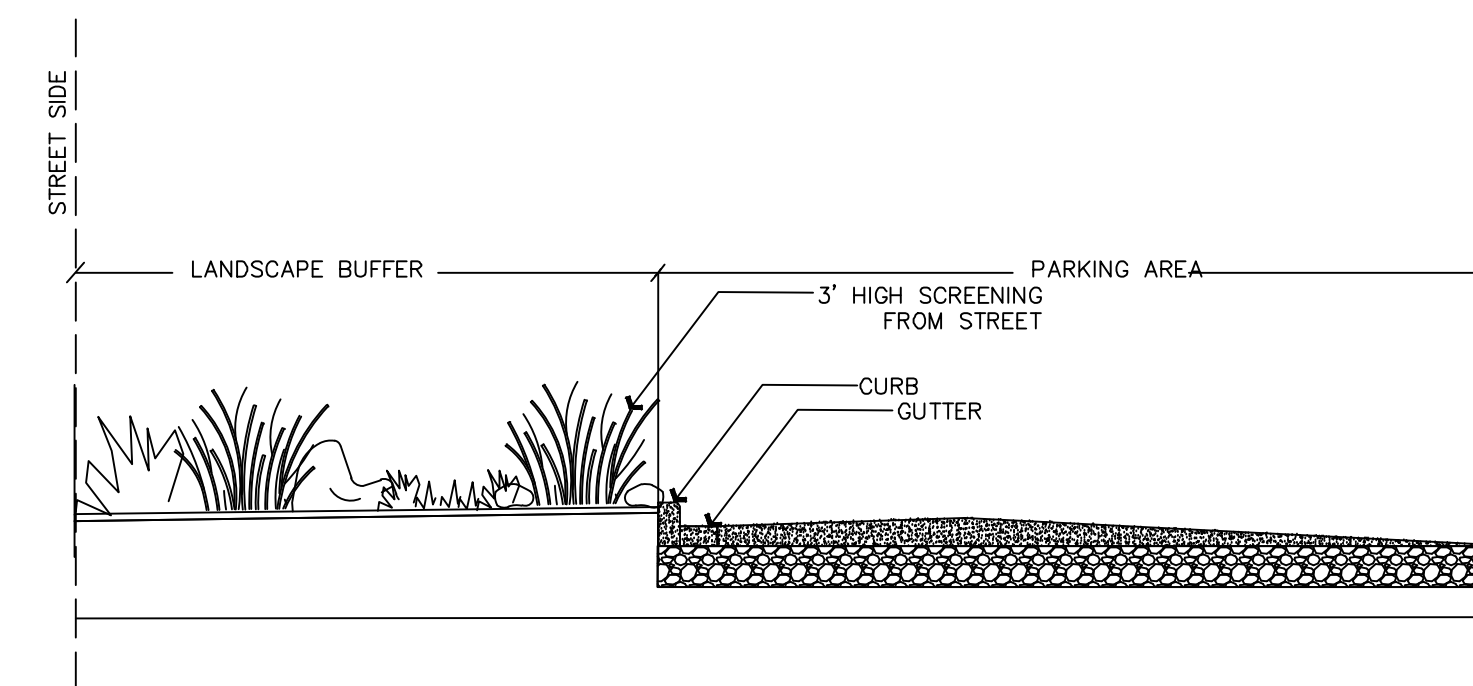
[Symbol]	JHW	3	Juniperus horizontalis 'Wiltonii' Blue Rug Juniper 8" x 8'; low water; sun; z3; Utah Lake water tolerant	5 gal
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GRASSES

[Symbol]	M'ML	14	Miscanthus sinensis 'Morning Light' Morning Light Maiden Grass Tw2; 5x4; AV 32; sun to light shade; z5; Utah Lake water tolerant	2 gal
[Symbol]	PV'S	18	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass Tw2; 4x2-3; AV 3; sun; z4; Utah Lake water tolerant	1 gal

PERENNIALS

[Symbol]	VP'G	48	Veronica peduncularis 'Georgia Blue' Georgia Blue Speedwell	5 gal
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1 PARKING LOT SCREENING DETAIL

NOT TO SCALE

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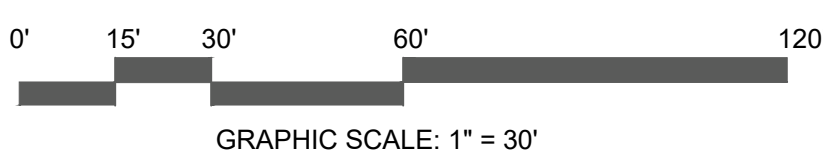
ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
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3/26/2024

UT24038

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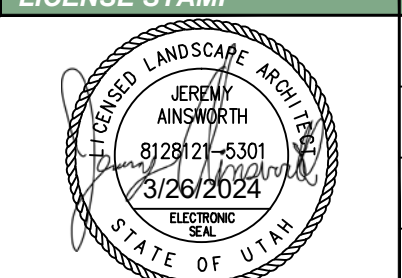
CC CALLAWAY
77 N. SUMMIT RIDGE PARKWAY
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LANDSCAPE PLAN
CITY PERMIT SET

LP-100

LANDSCAPE PLAN SPECIFICATIONS

- PART I - GENERAL**
- SUMMARY**
 - THIS SECTION INCLUDES LANDSCAPE PROCEDURES FOR THE PROJECT INCLUDING ALL LABOR, MATERIALS, AND INSTALLATION NECESSARY, BUT NOT LIMITED TO, THE FOLLOWING:**
 - SITE CONDITIONS
 - GUARANTEES
 - MAINTENANCE
 - SOIL AMENDMENTS
 - FINE GRADING
 - LANDSCAPE EDGING
 - FURNISH AND INSTALLING PLANT
 - TURF PLANTING
 - WEED BARRIER
 - SITE CONDITIONS
 - EXAMINATION: BEFORE SUBMITTING A BID, EACH CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, SHALL VISIT THE SITE OF THE WORK, SHALL FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, AND SHALL INCLUDE IN THE BID THE COST OF ALL ITEMS REQUIRED BY THE CONTRACT DOCUMENTS ARE, AT A VARIANCE WITH THE APPLICABLE LAWS, BUILDING CODES, RULES, REGULATIONS, OR CONTAIN OBVIOUS, ERRONEOUS OR UNCOORDINATED INFORMATION, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT REPRESENTATIVE AND THE NECESSARY CHANGES SHALL BE ACCOMPLISHED BY ADDENDUM.**
 - PROTECTION: CONTRACTOR TO CONDUCT THE WORK IN SUCH A MANNER TO PROTECT ALL EXISTING UNDERGROUND UTILITIES OR STRUCTURES. CONTRACTOR TO REPAIR OR REPLACE ANY DAMAGED UTILITY OR STRUCTURE USING IDENTICAL MATERIALS TO MATCH EXISTING AT NO EXPENSE TO THE OWNER.**
 - IRRIGATION SYSTEM: DO NOT BEGIN PLANTING UNTIL THE IRRIGATION SYSTEM IS COMPLETELY INSTALLED, IS ADJUSTED FOR FULL COVERAGE AND IS COMPLETELY OPERATIONAL.**
 - PERMITS**
 - BLUE STAKE/ DIG LINE: WHEN DIGGING IS REQUIRED, "BLUE STAKE" OR "DIG LINE" THE WORK SITE AND IDENTIFY THE APPROXIMATE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES OR STRUCTURES.**
 - PLANT DELIVERY, QUALITY, AND AVAILABILITY**
 - UNAUTHORIZED SUBSTITUTIONS WILL NOT BE ACCEPTED. IF PROOF IS SUBMITTED THAT SPECIFIC PLANTS OR PLANT SIZES ARE UNOBTAINABLE, WRITTEN SUBSTITUTION REQUESTS WILL BE CONSIDERED FOR THE NEAREST EQUIVALENT PLANT OR SIZE. ALL SUBSTITUTION REQUESTS MUST BE MADE IN WRITING AND PREFERABLY BEFORE THE BID DUE DATE.**
 - FINAL INSPECTION**
 - ALL PLANTS WILL BE INSPECTED AT THE TIME OF FINAL INSPECTION PRIOR TO RECEIVING A LANDSCAPE SUBSTANTIAL COMPLETION FOR CONFORMANCE TO SPECIFIED PLANTING PROCEDURES, AND FOR GENERAL APPEARANCE AND VITALITY. ANY PLANT NOT APPROVED BY THE PROJECT REPRESENTATIVE WILL BE REJECTED AND REPLACED IMMEDIATELY.**
 - LANDSCAPE/SUBSTANTIAL COMPLETION**
 - A SUBSTANTIAL COMPLETION CERTIFICATE WILL ONLY BE ISSUED BY THE PROJECT REPRESENTATIVE FOR "LANDSCAPE AND IRRIGATION" IN THEIR ENTIRETY. SUBSTANTIAL COMPLETION WILL NOT BE PROPORTIONED TO BE DESIGNATED AREAS OF A PROJECT.**
 - MAINTENANCE**
 - PLANT MATERIAL: THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL PLANTED MATERIALS IN A HEALTHY AND GROWING CONDITION FOR 30 DAYS AFTER RECEIVING A LANDSCAPE SUBSTANTIAL COMPLETION AT WHICH TIME THE GUARANTEE PERIOD COMMENCES. THIS MAINTENANCE IS TO INCLUDE MOWING, WEEDING, CULTIVATING, FERTILIZING, MONITORING WATER SCHEDULES, CONTROLLING INSECTS AND DISEASES, RE-GUYNIG AND STAKING, AND ALL OTHER OPERATIONS OF CARE NECESSARY FOR THE PROMOTION OF ROOT GROWTH AND PLANT LIFE SO THAT ALL PLANTS ARE IN A CONDITION SATISFACTORY AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR FAILURE TO MONITOR WATERING OPERATIONS AND SHALL REPLACE ANY AND ALL PLANT MATERIAL THAT IS LOST DUE TO IMPROPER APPLICATION OF WATER.**
 - GUARANTEE**
 - A GUARANTEE: A GUARANTEE PERIOD OF ONE YEAR SHALL BEGIN FROM END OF MAINTENANCE PERIOD AND FINAL ACCEPTANCE FOR TREES, SHRUBS, AND GROUND COVERS. ALL PLANTS SHALL GROW AND BE HEALTHY FOR THE GUARANTEE PERIOD AND TREES SHALL LIVE AND GROW IN ACCEPTABLE UPRIGHT POSITION. ANY PLANT NOT ALIVE IN POOR HEALTH, OR IN POOR CONDITION AT THE END OF THE GUARANTEE PERIOD WILL BE REPLACED IMMEDIATELY. ANY PLANT WILL ONLY NEED TO BE REPLACED ONCE DURING THE GUARANTEE PERIOD. CONTRACTOR TO PROVIDE DOCUMENTATION SHOWING WHERE EACH PLANT TO BE REPLACED IS LOCATED. ANY OUTSIDE FACTORS, SUCH AS VANDALISM OR LACK OF MAINTENANCE ON THE PART OF THE OWNER, SHALL NOT BE PART OF THE GUARANTEE**

GENERAL LANDSCAPE NOTES

- GRADING AND DRAINAGE REQUIREMENTS**
- AS PER CODE, ALL GRADING IS TO SLOPE AWAY FROM ANY STRUCTURE. SURFACE OF THE GROUND WITHIN 10 FEET OF THE FOUNDATION SHOULD DRAIN AWAY FROM THE STRUCTURE WITH A MINIMUM FALL OF 6"
 - AS PER CODE, FINISHED GRADE WILL NOT DRAIN ON NEIGHBORING PROPERTIES
 - A MINIMUM OF 6" OF FOUNDATION WILL BE LEFT EXPOSED AT ALL CONDITIONS
 - LANDSCAPE CONTRACTOR TO MAINTAIN OR IMPROVE FINAL GRADE AND PROPER DRAINAGE ESTABLISHED BY EXCAVATOR, INCLUDING BUT NOT LIMITED TO ANY MAINTENANCE, PRESERVATION, OR RECONSTRUCTION OF SLOPES, BERMS, AND SWALES
 - LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DAMAGED OR IMPROPER WATERFLOW OF ALL SWALES, BERMS, OR GRADE
 - DEVICES FOR CHANNILING ROOF RUN-OFF SHOULD BE INSTALLED FOR COLLECTION AND DISCHARGE OF RAINWATER AT A MINIMUM OF 10" FROM THE FOUNDATION, OR BEYOND THE LIMITS OF FOUNDATION WALL BACKFILL, WITH THE DISTANCE IS GREATER
- GENERAL LANDSCAPE NOTES**
- LANDSCAPE CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
 - DURING THE HIDDING AND INSTALLATION PROCESS, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS IF DISCREPANCIES EXIST, THE PLAN SHALL DICTATE QUANTITIES TO BE USED.
 - ALL PLANT MATERIAL SHALL BE PLANTED ACCORDING TO ANSI STANDARDS WITH CONSIDERATION TO INDIVIDUAL SOIL AND SITE CONDITIONS, AND NURSERY CARE AND INSTALLATION INSTRUCTIONS.
 - SELECTED PLANTS WILL BE ACCORDING TO THE PLANT LEGEND. IF SUBSTITUTIONS ARE NECESSARY, PROPOSED LANDSCAPE CHANGES MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO LAYING SOD.
 - SHOULD THE SITE REQUIRE ADDITIONAL TOPSOIL, REFER TO SOIL TEST WHEN MATCHING EXISTING SOIL. IF A MATCHING SOIL IS NOT LOCATABLE, A 6" DEPTH OF SANDY LOAM TOPSOIL, MIXED PRIOR TO SPREADING WITH 1% ORGANIC MATTER, CAN BE INCORPORATED INTO THE EXISTING SOIL USING THE FOLLOWING DIRECTIONS: SCARIFY TOP 6" OF EXISTING SUBSOIL AND INCORPORATE 3" OF NEW COMPOST ENRICHED TOPSOIL. SPREAD REMAINING TOPSOIL TO REACH FINISHED GRADE.
 - EDGING, AS INDICATED ON PLAN, IS TO BE INSTALLED BETWEEN ALL LAWN AND PLANTER AREAS. ANY TREES LOCATED IN LAWN MUST HAVE A 4-6" TREE RING OF THE SAME EDGING.
- LAWN/GRASS AREA**
- SOD**
 - ALL LAWN AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED HYDROSEEDING. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD. ALL LAWN AREAS SHALL BE IRRIGATED WITH 100% COVERAGE BY POP-UP SPRAY HEADS AND GEAR-DRIVEN ROTORS. ALL DECIDUOUS AND CONIFER TREES PLANTED WITHIN SOD AREAS SHALL HAVE A FOUR (4) FOOT DIAMETER TREE RING COVERED WITH GROUND-LAYE BROWN BARK MULCH, NO SHREDDED FINES. SUBMIT SAMPLES TO BE APPROVED BY LANDSCAPE ARCHITECT AND OWNER BEFORE INSTALLATION.
 - SEED**
 - SOIL TEST SOIL FOR ADEQUATE FERTILITY. ANY WEEDS CURRENTLY ON THE SITE SHALL BE REMOVED BY EITHER MECHANICAL MEANS SUCH AS HAND PULLING OR SPRAYING WITH AN HERBICIDE SUCH AS GLYPHOSATE MIXED WITH A SURFACTANT. HERBICIDES SHOULD BE APPLIED BY A CERTIFIED PESTICIDE APPLICATOR. COMPACTED SOIL SHALL BE SCARIFIED TO A DEPTH OF 18

- LANDSCAPE MATERIALS**
- TREE STAKING:** ALL TREES SHALL BE STAKED FOR ONE YEAR WARRANTY PERIOD. ALL TREES NOT PLUMB SHALL BE REPLACED. STAKED TREES SHALL USE VINYL TREE TIES AND TREE STAKES TWO (2) INCH BY TWO (2) BY EIGHT (8) FOOT COMMON PINE STAKES USED AS SHOWN ON THE DETAILS.
 - TREE WRAP:** TREE WRAP IS NOT TO BE USED.
 - MULCH/ROCK:** SEE PLANS. ALL PLANTER BEDS TO RECEIVE A MINIMUM 3" LAYER FOR TREES, SHRUBS, AND PERENNIALS AND 1" FOR GROUND COVERS.
 - WEED BARRIER:** DEWITT 5'0Z WEED BARRIER FABRIC, MANUFACTURED BY DEWITT COMPANY, DEWITTCOMPANY.COM OR APPROVED EQUAL.
 - TREE, SHRUB, AND GRASS BACKFILL:** MIXTURE, BACKFILL MIXTURE TO BE 75% NATIVE SOIL AND 25% TOPSOIL, THOROUGHLY MIXED TOGETHER PRIOR TO PLACEMENT.
 - F. TOPSOIL REQUIRED FOR TURF AREAS, PLANTER BEDS AND BACKFILL MIXTURE.** ACCEPTABLE TOPSOIL SHALL MEET THE FOLLOWING STANDARDS:
 - PH: 5.5-7.5
 - EC (ELECTRICAL CONDUCTIVITY): < 20 MMHOS PER CENTIMETER
 - SAR (SODIUM ABSORPTION RATION): < 30
 - % OM (PERCENT ORGANIC MATTER): > 1%
 - TEXTURE (PARTICLE SIZE PER USDA SOIL CLASSIFICATION): SAND <70%, CLAY < 30%, SILT < 70%, STONE FRAGMENTS (GRAVEL OR ANY SOIL PARTICLE GREATER THAN TWO (2) MM IN SIZE) < 5% BY VOLUME.
 - TURF SOD:** ALL SOD SHALL BE 18 MONTH OLD AS SPECIFIED ON PLANS (OR APPROVED EQUAL) THAT HAS BEEN CUT FRESH THE MORNING OF INSTALLATION. ONLY SOD THAT HAS BEEN GROWN ON A COMMERCIAL SOD FARM SHALL BE USED. ONLY USE SOD FROM A SINGLE SOURCE.
 - LANDSCAPE CURB EDGING:** SIX (6) INCHES BY FOUR (4) INCHES EXTRUDED CONCRETE CURB MADE UP OF THE FOLLOWING MATERIALS:
 - WASHED MORTAR SAND FREE OF ORGANIC MATERIAL.
 - PORTLAND CEMENT (SEE CONCRETE SPEC. BELOW FOR TYPE)
 - REINFORCED FIBER - SPECIFICALLY PRODUCED FOR COMPATIBILITY WITH AGGRESSIVE/ALKALINE ENVIRONMENT OF PORTLAND CEMENT-BASED COMPOSITES.
 - ONLY POTABLE WATER FOR MIXING.
 - LANDSCAPE METAL EDGING:** 5.5" STEEL EDGING WITH 15" DOWELS INTO THE GROUND FOR STABILIZATION.

- PART III - EXECUTION**
- GRADING**
 - TOPSOIL PREPARATION:** GRADE PLANTING AREAS ACCORDING TO THE GRADING PLAN. ELIMINATE UNEVEN AREAS AND LOW SPOTS. PROVIDE FOR PROPER GRADING AND DRAINAGE.
 - TPOSOIL PLACEMENT:** SLOPE SURFACE AWAY FROM BUILDING AT TWO (2) PERCENT SLOPE WITH NO POCKETS OF STANDING WATER. ESTABLISH FINISH GRADES OF ONE (1) INCHES FOR PLANTERS BELOW GRADE OF ADJACENT PAVED SURFACE. PROVIDE NEAT, SMOOTH, AND UNIFORM FINISH GRADES. REMOVE SURPLUS SUB-SOIL AND TOPSOIL FROM THE SITE.
 - COMPACTION:** COMPACTION UNDER HARD SURFACE AREAS (ASPHALT PATHS AND CONCRETE SURFACES) SHALL BE NINETY-FIVE (95) PERCENT. COMPACTION UNDER PLANTING AREAS SHALL BE BETWEEN EIGHTY-FIVE (85) AND NINETY (90) PERCENT.
 - TURF GRADING**
 - THE SURFACE ON WHICH THE SOD IS TO BE LAID SHALL BE FIRM AND FREE FROM FOOTPRINTS, DEPRESSIONS, OR UNDELETIONS OF ANY KIND. THE SURFACE SHALL BE FREE OF ALL MATERIALS LARGER THAN 1/2" IN DIAMETER.
 - THE FINISH GRADE OF THE TOPSOIL ADJACENT TO ALL SIDEWALKS, MOW STRIPS, ETC. PRIOR TO THE LAYING OF SOD, SHALL BE SET SUCH THAT THE CROWN OF THE GRASS SHALL BE AT THE SAME LEVEL AS THE ADJACENT CONCRETE OR HARD SURFACE. NO EXCEPTIONS.
 - PLANTING OPERATIONS**
 - REVIEW THE EXACT LOCATIONS OF ALL TREES AND SHRUBS WITH THE PROJECT REPRESENTATIVE FOR APPROVAL PRIOR TO THE DIGGING OF ANY HOLES. PREPARE ALL HOLES ACCORDING TO THE DETAILS ON THE DRAWINGS.
 - WATER PLANTS IMMEDIATELY UPON ARRIVAL AT THE SITE. MAINTAIN IN MOIST CONDITION UNTIL PLANTED.
 - BEFORE PLANTING, LOCATE ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. DO NOT PLACE PLANTS ON OR NEAR UTILITY LINES.
 - THE TREE PLANTING HOLE SHOULD BE THE SAME DEPTH AS THE ROOT BALL, AND TWO TIMES THE DIAMETER OF THE ROOT BALL.
 - TREES MUST BE PLACED ON UNDISTURBED SOIL AT THE BOTTOM OF THE PLANTING HOLE.
 - THE TREE HOLE DEPTH SHALL BE DETERMINED SO THAT THE TREE MAY BE SET SLIGHTLY HIGH OF FINISH GRADE, 1" TO 2" ABOVE THE BASE OF THE TRUNK FLARE, USING THE TOP OF THE ROOT BALL AS A GUIDE.
 - PLANT IMMEDIATELY AFTER REMOVAL OF CONTAINER FOR CONTAINER PLANTS. HSET TREE ON SOIL AND REMOVE ALL BURLAP, WIRE BASKETS, TWINE, WRAPPINGS, ETC. BEFORE

- BEGINNING AND BACKFILLING OPERATIONS. DO NOT USE PLANTING STOCK IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.**
- APPLY VITAMIN B-1 ROOT STIMULATOR AT THE RATE OF ONE (1) TABLESPOON PER GALLON.
 - UPON COMPLETION OF BACKFILLING OPERATION, THOROUGHLY WATER TREE TO COMPLETELY SETTLE THE SOIL AND FILL ANY VOIDS THAT MAY HAVE OCCURRED. USE A WATERING HOSE, NOT THE AREA IRRIGATION SYSTEM. IF ADDITIONAL PREPARED TOPSOIL MIXTURE NEEDS TO BE ADDED, IT SHOULD BE A COURSER MIX AS REQUIRED TO ESTABLISH FINISH GRADE AS INDICATED ON THE DRAWINGS.
 - THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE DEAD OR BRUISED TWIGS AND BRANCHES. ALL CUTS, SCARS, AND BRUISES SHALL BE PROPERLY TREATED ACCORDING TO THE DIRECTION OF THE PROJECT REPRESENTATIVE. PROPER PRUNING TECHNIQUES SHALL BE USED. DO NOT LEAVE STUBS AND DO NOT CUT THE LEADER BRANCH. IMPROPER PRUNING SHALL BE CAUSE FOR REJECTION OF THE PLANT MATERIAL.
 - PREPARE A WATERING CIRCLE OF 2' DIAMETER AROUND THE TRUNK. FOR CONIFERS, EXTEND THE WATERING WELL TO THE DRIP LINE OF THE TREE CANOPY. PLACE MULCH AROUND THE PLANTED TREES.
 - TURF - SOD LAYING
 - TOP SOIL AMENDMENTS: PRIOR TO LAYING SOD, COMMERCIAL FERTILIZER SHALL BE APPLIED AND INCORPORATED INTO THE UPPER FOUR (4) INCHES OF THE TOPSOIL AT A RATE OF FOUR POUNDS OF NITROGEN PER ONE THOUSAND (1,000) SQUARE FEET. ADJUST FERTILIZATION MIXTURE AND RATE OF APPLICATION AS NEEDED TO MEET RECOMMENDATIONS GIVEN BY TOPSOIL ANALYSIS. INCLUDE OTHER AMENDMENTS AS REQUIRED.
 - FERTILIZATION: THREE WEEKS AFTER SOD PLACEMENT FERTILIZE THE TURF AT A RATE OF 1/2 POUND OF NITROGEN PER 1000 SQUARE FEET. USE FERTILIZER SPECIFIED ABOVE. ADJUST FERTILIZATION MIXTURE AND RATES TO MEET RECOMMENDATIONS GIVEN BY TOPSOIL ANALYSIS.
 - SOD AVAILABILITY AND CONDITION: SOD IS TO BE DELIVERED TO THE SITE IN GOOD CONDITION. IT IS TO BE INSPECTED UPON ARRIVAL AND INSTALLED WITHIN 24 HOURS. SOD IS TO BE MOIST AND COOL TO ENSURE THAT DECOMPOSITION HAS NOT BEGUN AND IS TO BE FREE OF PESTS, DISEASES, OR BLEMISHES. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE EXISTING CONDITIONS PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FURNISHING AND LAYING ALL SOD REQUIRED ON THE PLANS. HE SHALL FURNISH NEW SOD AS SPECIFIED ABOVE AND LAY IT AS SOO COMPLETELY SATISFIED THE INTENT AND MEANING OF THE PLANS AND SPECIFICATION AT NO EXTRA COST TO THE OWNER. IN THE CASE OF ANY DISCREPANCY IN THE AMOUNT OF SOD TO BE REMOVED OR AMOUNT TO BE USED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT SUCH TO THE PROJECT REPRESENTATIVE PRIOR TO COMMENCING THE WORK.
 - DSOD LAYING: THE SURFACE UPON WHICH THE NEW SOD TO BE LAID WILL BE PREPARED AS SPECIFIED IN THE DETAIL AND BE LIGHTLY WATERED BEFORE LAYING. AREAS WHERE SOD IS TO BE LAID SHALL BE CUT TRIMMED, OR SHAPED TO RECEIVE FULL WIDTH SOD (MINIMUM TWELVE (12) INCHES). NO PARTIAL STRIP OR PIECES WILL BE ACCEPTED.
 - SOD SHALL BE TAMPED LIGHTLY AS EACH PIECE IS SET TO ENSURE THAT GOOD CONTACT IS MADE BETWEEN EDGES AND ALSO THE GROUND. IF VOIDS OR HOLES ARE DISCOVERED, THE SOD PIECES IS (ARE) TO BE RAISED AND TOPSOIL IS TO BE USED TO FILL IN THE AREAS UNTIL LEVEL. SOD LAD ON ANY SLOPED AREA SHALL BE ANCHORED WITH WOODEN DOWELS OR OTHER MATERIALS WHICH ARE ACCEPTED BY THE GRASS SOD INDUSTRY.
 - SOD SHALL BE ROLLED WITH A ROLLER THAT IS AT LEAST 50% FULL IMMEDIATELY AFTER INSTALLATION TO ENSURE THE FULL CONTACT WITH SOIL IS MADE.
 - WATERY WATER DIRECTLY AFTER LAYING SOD. RAINFALL IS NOT ACCEPTABLE.
 - APPLICATION OF THE SOD SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR BY WHATEVER MEANS NECESSARY TO ESTABLISH THE SOD IN AN ACCEPTABLE MANNER TO THE END OF THE MAINTENANCE PERIOD. IF AN IRRIGATION SYSTEM IS IN PLACE ON THE SITE, BUT FOR WHATEVER REASON, WATER IS NOT AVAILABLE IN THE SYSTEM, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO WATER THE SOD BY WHATEVER MEANS, UNTIL THE SOD IS ACCEPTED BY THE PROJECT REPRESENTATIVE.
 - PROTECTION OF THE NEWLY LAID SOD SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ACCEPTABLE VISUAL BARRIERS, TO INCLUDE BARRICADES SET AT APPROPRIATE DISTANCES WITH STRINGS OR TAPES BETWEEN BARRIERS, AS AN INDICATION OF NO WORK. THE CONTRACTOR IS TO RESTORE ANY DAMAGED AREAS CAUSED BY OTHERS INCLUDING VEHICULAR TRAFFIC, EROSION, ETC., UNTIL SUCH TIME AS THE LAWN IS ACCEPTED BY THE OWNER.
 - ALL SOD THAT HAS NOT BEEN LAID WITHIN 24 HOURS SHALL BE DEEMED UNACCEPTABLE AND WILL BE REMOVED FROM THE SITE.
 - WEED BARRIER**
 - FOR THE HEALTH OF THE SOIL AND THE MICROORGANISMS, WEED BARRIER IS NOT RECOMMENDED. IF USE IS REQUESTED OR REQUESTED, DO NOT PLACE IN ANNUAL OR GRASS AREAS.
 - CUT WEED BARRIER BACK TO THE EDGE OF THE PLANT ROOTBALL.
 - OVERLAP ROWS OF FABRIC MIN. 6"
 - DESTABE FABRIC EDGES AND OVERLAPS TO GROUND.
- END OF SECTION**

- MULCH**
- ORGANIC**
 - PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. PROVIDE 4" DEPTH OF ORGANIC MULCH TOP DRESSING. KEEP MULCH AWAY FROM TOP OF ROOT BALL OF ALL PLANT MATERIAL.
 - IF REQUIRED BY CITY, INSTALL DEWITT 50Z WEED BARRIER LANDSCAPE FABRIC UNDER ALL MULCH AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREELAN 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
 - IF USING TREELAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM SUBMIT PROGRAM TO OWNER.
 - ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AND MATERIAL (ORGANIC MULCH). NO MULCH SHALL BE PLACED WITHIN 12" OF TREE TRUNK AND 6" WITHIN BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
 - INORGANIC**
 - ROCK MULCH PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. WHERE PLANTING IS SPARSE (GREATER THAN 4" DISTANCE BETWEEN PLANTS OR 20" BETWEEN GROUPINGS), ADDITIONAL TOPSOIL IS NOT NECESSARY EXCEPT FOR BACKFILLING PLANTING HOLES. PREPARE A HOLE TWICE THE WIDTH OF THE CONTAINER, WATER IN PLANT. BACKFILL WITH A 4:1 RATIO OF SOIL TO COMPOST. TAMP LIGHTLY AND WATER AGAIN. KEEP ROCK 12" AWAY FROM TRUNK OF TREES AND 6" AWAY FROM BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
 - IF REQUIRED BY CITY, INSTALL DEWITT 50Z WEED BARRIER LANDSCAPE FABRIC UNDER ALL ROCK AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREELAN 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
 - IF USING TREELAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM SUBMIT PROGRAM TO OWNER. UPON REQUEST, A PLANT GUIDE IS AVAILABLE WITH OUR RECOMMENDATIONS REGARDING WEED BARRIER, PLANT CARE AND MAINTENANCE.
- GENERAL IRRIGATION NOTES**
- A NEW UNDERGROUND, AUTOMATIC IRRIGATION SYSTEM IS TO BE INSTALLED BY CONTRACTOR IN ALL LANDSCAPED AREAS. LAWN AREAS TO RECEIVE AT LEAST 100% HEAD TO HEAD COVERAGE AND PLANTER AREAS TO RECEIVE A FULL DRIP SYSTEM TO EACH TREE AND SHRUB. POINT SOURCE DRIP OR IN-LINE DRIP TUBING TO BE SECURED AT CENTER OF ROOT BALL, NOT AGAINST TRUNK. SEE IRRIGATION PLAN.
- INSTALLER RESPONSIBILITIES AND LIABILITIES**
- THESE PLANS ARE FOR BASIC DESIGN LAYOUT AND INFORMATION. LANDSCAPE CONTRACTOR IS REQUIRED TO USE TRADE KNOWLEDGE FOR IMPLEMENTATION. OWNER ASSUMES NO LIABILITIES FOR INADEQUATE ENGINEERING CALCULATIONS, MANUFACTURER PRODUCT DEFECTS, INSTALLATION OF ANY LANDSCAPING AND COMPONENTS, OR TIME EXECUTION.
 - LANDSCAPE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR INSTALLATION OF ALL LANDSCAPING AND IRRIGATION SYSTEMS INCLUDING CODE REQUIREMENTS, TIME EXECUTIONS, INSTALLED PRODUCTS AND MATERIALS.

SITE MATERIALS LEGEND

SYMBOL	DESCRIPTION	QTY
	1" MINUS GREY CRUSHED ROCK.	5,751 sf
	2-4" TAN CRUSHED ROCK.	15,028 sf
SYMBOL	HARDSCAPE DESCRIPTION	QTY
	5" DEEP STEEL EDGING - INSTALL PER MANUFACTURER SPECIFICATION.	176 lf

SITE REQUIREMENT CALCULATIONS

ZONING CLASSIFICATION: I-1 INDUSTRIAL
PROPOSED DEVELOPMENT TYPE: INDUSTRIAL
ADJACENT DEVELOPMENT ZONES: PF ZONE TO THE EAST ACROSS FROM SUMMIT RIDGE PARKWAY, UNINCORPORATED UTAH COUNTY TO SOUTH AND WEST, I-1 TO THE NORTH
TOTAL SITE AREA: 94,628 SQ. FT.

LANDSCAPE AREA:
 MINIMUM 8% ON SITE LANDSCAPING AS A PERCENTAGE OF TOTAL SITE AREA
 TOTAL SITE AREA: 94,628 SQ. FT.

REQUIRED:	PROVIDED:
7,570 SQ. FT. (8%)	8,582 SQ. FT. (9%)
REQUIRED:	PROVIDED:
7 TREES, 10 SHRUBS	7 TREES, 10 SHRUBS
REQUIRED:	PROVIDED:
4 SHRUBS / 40 LN. FT.	21 SHRUBS
DRY MOUNTAIN DRIVE: 209 LN. FT.	29 SHRUBS
NEBO WAY: 293 LN. FT.	29 SHRUBS
REQUIRED:	PROVIDED:
12,609 SQ. FT. TOTAL	1,145 SQ. FT. (9%)
REQUIRED:	PROVIDED:
1 TREE, 4 SHRUBS	1 TREE, 4 SHRUBS
2 TREES, 24 SHRUBS	2 TREES, 24 SHRUBS
2 TREES, 20 SHRUBS	2 TREES, 20 SHRUBS
1 TREE, 4 SHRUBS	1 TREE, 4 SHRUBS

GRASSES

REQUIRED:	PROVIDED:
MAX % OF ANY ONE SPECIES: 60% (NO MORE THAN 16 TREES OF ANY ONE SPECIES)	4 JUNIPER, 10 HAWTHORNE, 7 RASPBERRY SPEAR CRABAPPLE, 6 SPRING SNOW CRABAPPLE, 3 OAK
REQUIRED:	PROVIDED:
0.5Q. FT. (20% OF REQUIRED LANDSCAPE AREA)	0 SQ. FT. (0% OF REQUIRED LANDSCAPE AREA)

PERENNIALS

REQUIRED:	PROVIDED:
48	5g

PLANT LEGEND

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	JVT	4	Juniperus virginiana 'Taylor' Taylor Eastern Redcedar	B & B		6'
	CC1	10	Crataegus crus-gali inermis Thornless Cockspur Hawthorn	B & B	2" Cal	
	MRS	7	Malus x 'Raspberry Spear' Raspberry Spear Crabapple	B & B	2" Cal	
	MSS	4	Malus x 'Spring Snow' Spring Snow Crab Apple	B & B	2" Cal	
	QRA	3	Quercus robur x alba 'JFS-KWIQX' TM Street Spruce Oak	B & B	2" Cal	

DECIDUOUS SHRUBS

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	AAR	4	Amelanchier alnifolia 'Regent' Regent Serviceberry	5 gal
	AMS	38	Aronia melanocarpa 'S/MINAMPEM' Low Scape Snowfire™ Black Chokeberry	5 gal
	BPA	36	Buddleja x 'SMNBOL' Pugster Amethyst Dwarf Butterfly Bush	5 gal
	BTB	26	Berberis thunbergii 'BaillEli' Lambrusco™ Japanese Barberry	5 gal
	CFG	12	Caragana frutes 'Globsa' Globe Peashrub	5 gal
	PBP	15	Prunus besseyi 'P0115' Pawnee Buttes' Pawnee Buttes Sand Cherry	5 gal

EVERGREEN SHRUBS

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	JHW	3	Juniperus horizontalis 'Wiltoni' Blue Rug Juniper	5 gal

GRASSES

REQUIRED:	PROVIDED:
MAX % OF ANY ONE SPECIES: 60% (NO MORE THAN 16 TREES OF ANY ONE SPECIES)	4 JUNIPER, 10 HAWTHORNE, 7 RASPBERRY SPEAR CRABAPPLE, 6 SPRING SNOW CRABAPPLE, 3 OAK

PERENNIALS

REQUIRED:	PROVIDED:
48	5g

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
3/26/2024	UT24038						P#: JTA DRAWN: ALR CHECKED: JMA PLOT DATE: 3/26/2024

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77 N. SUMMIT RIDGE PARKWAY

SANTAQUIN, UTAH

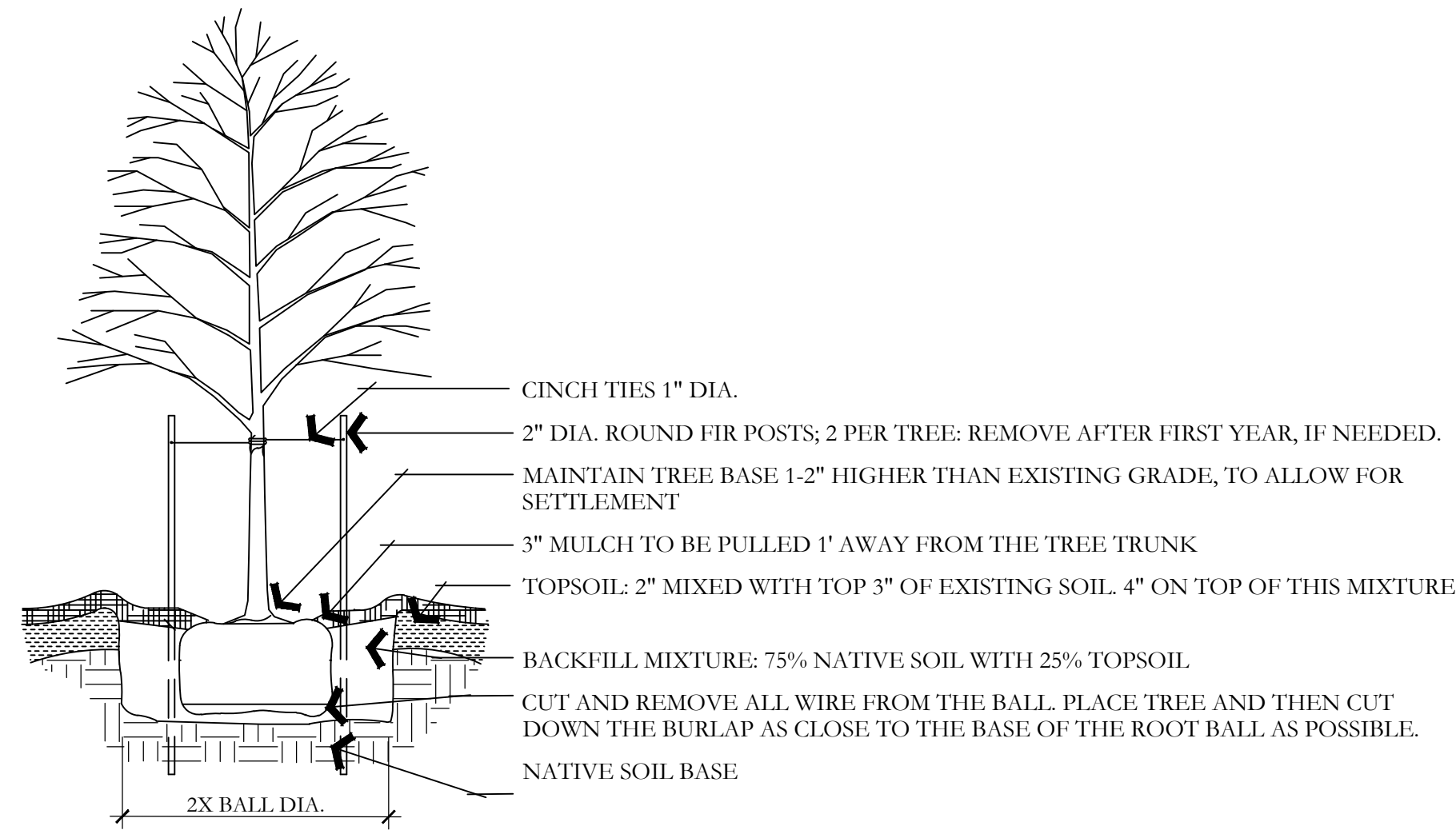
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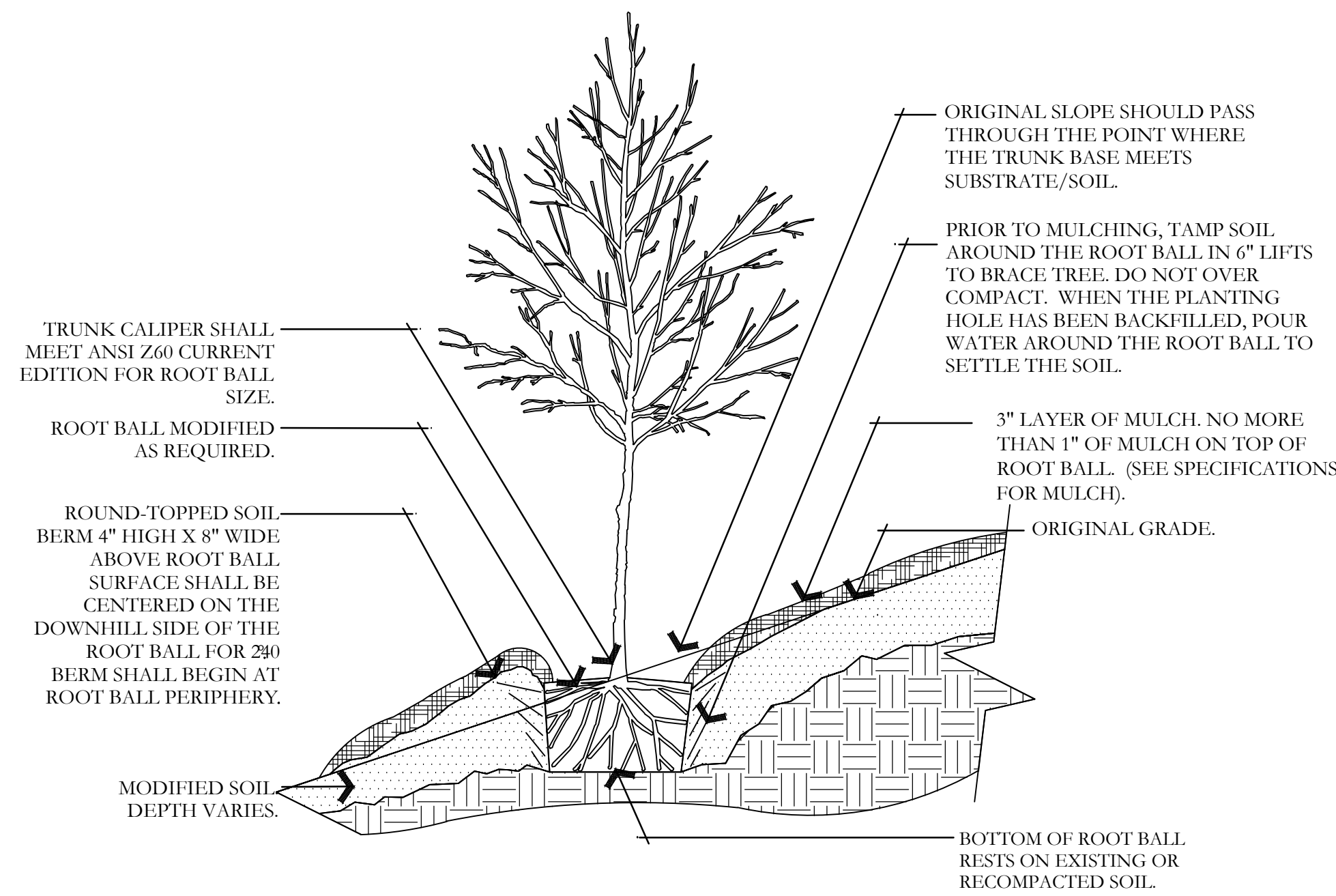
LP-101



A DECIDUOUS TREE PLANTING

NOT TO SCALE

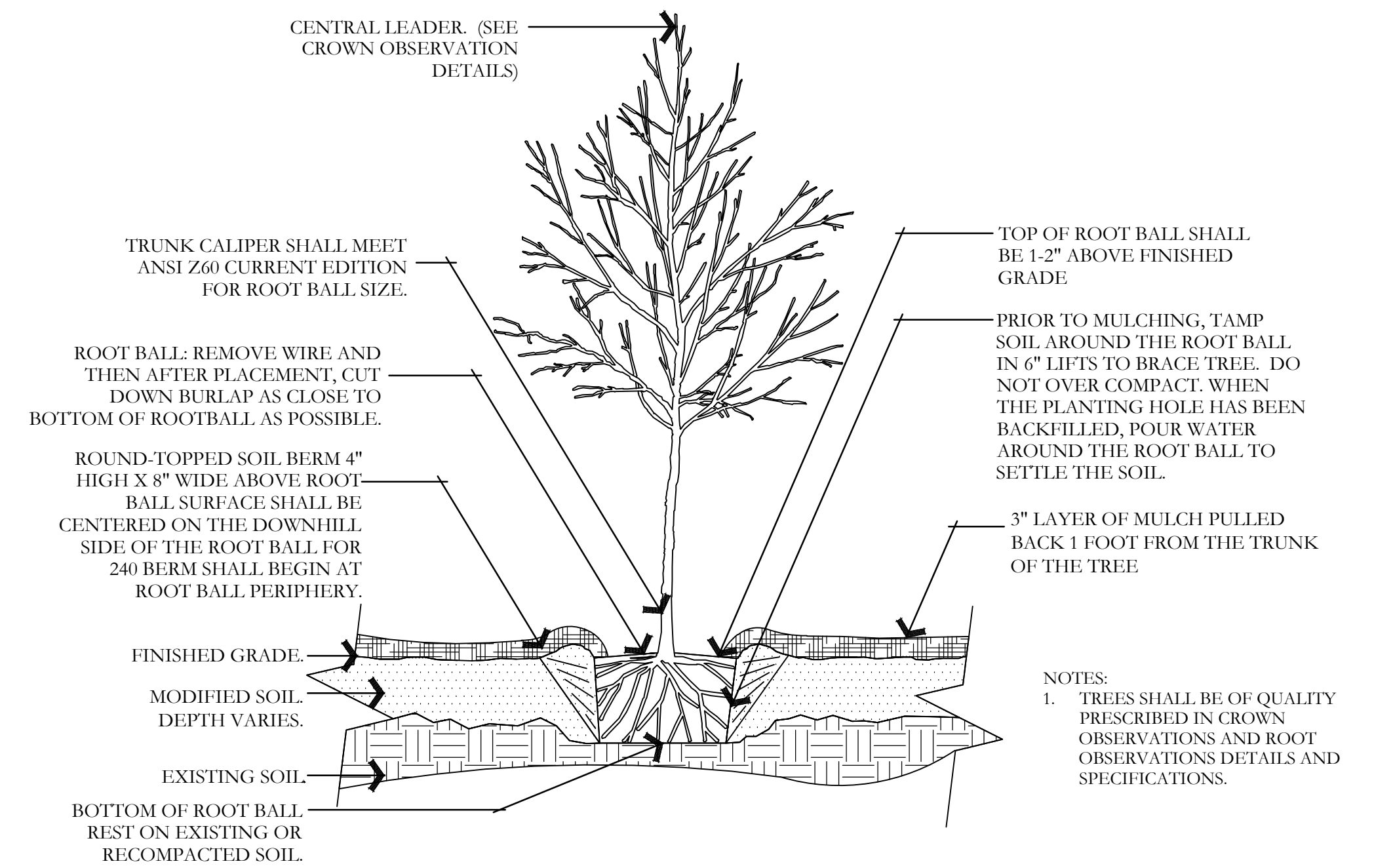
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B TREE ON SLOPE 5% (20:1) TO 50% (2:1)

NOT TO SCALE

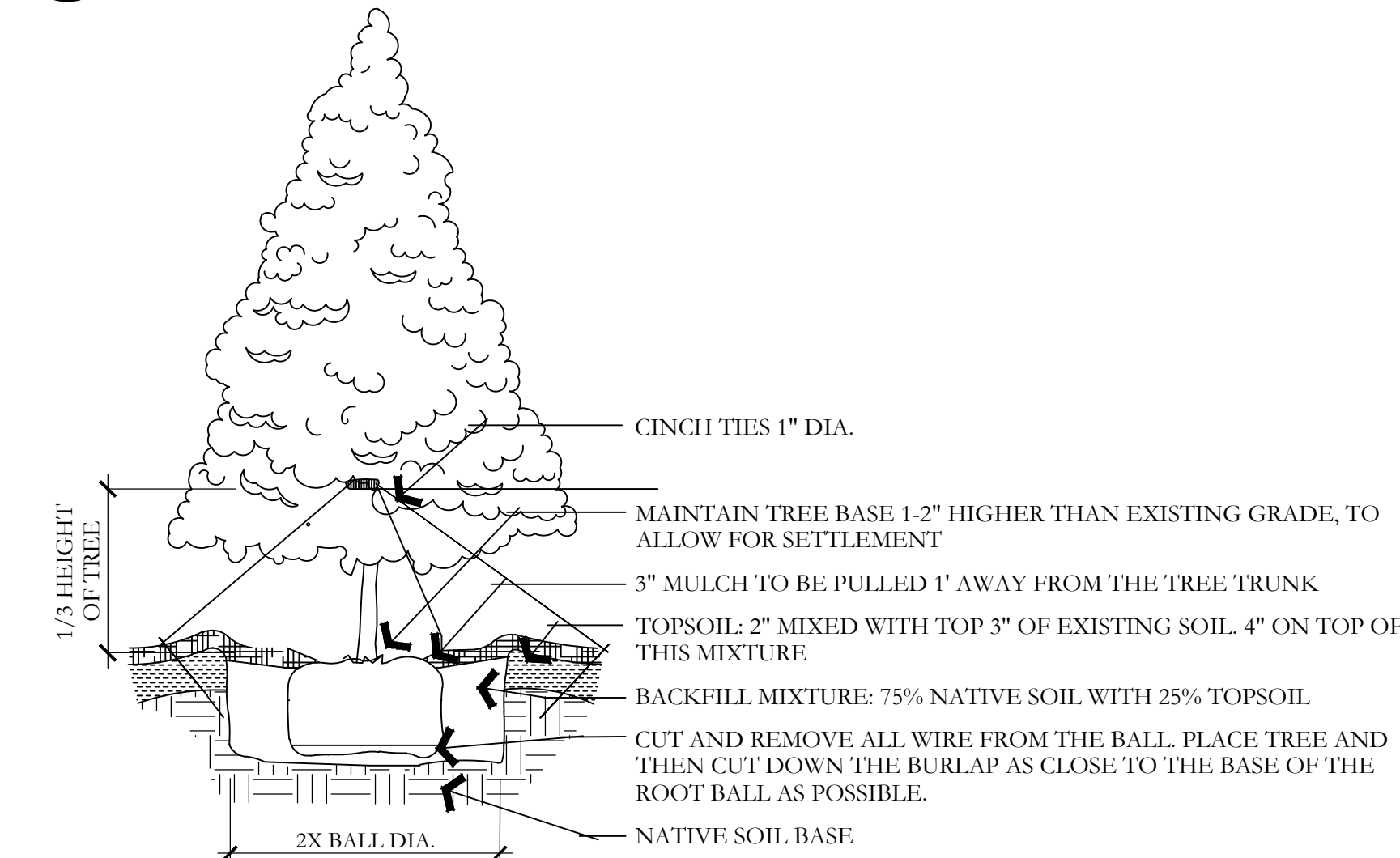
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C TREE W/ BERM (EXISTING SOIL MODIFIED)

NOT TO SCALE

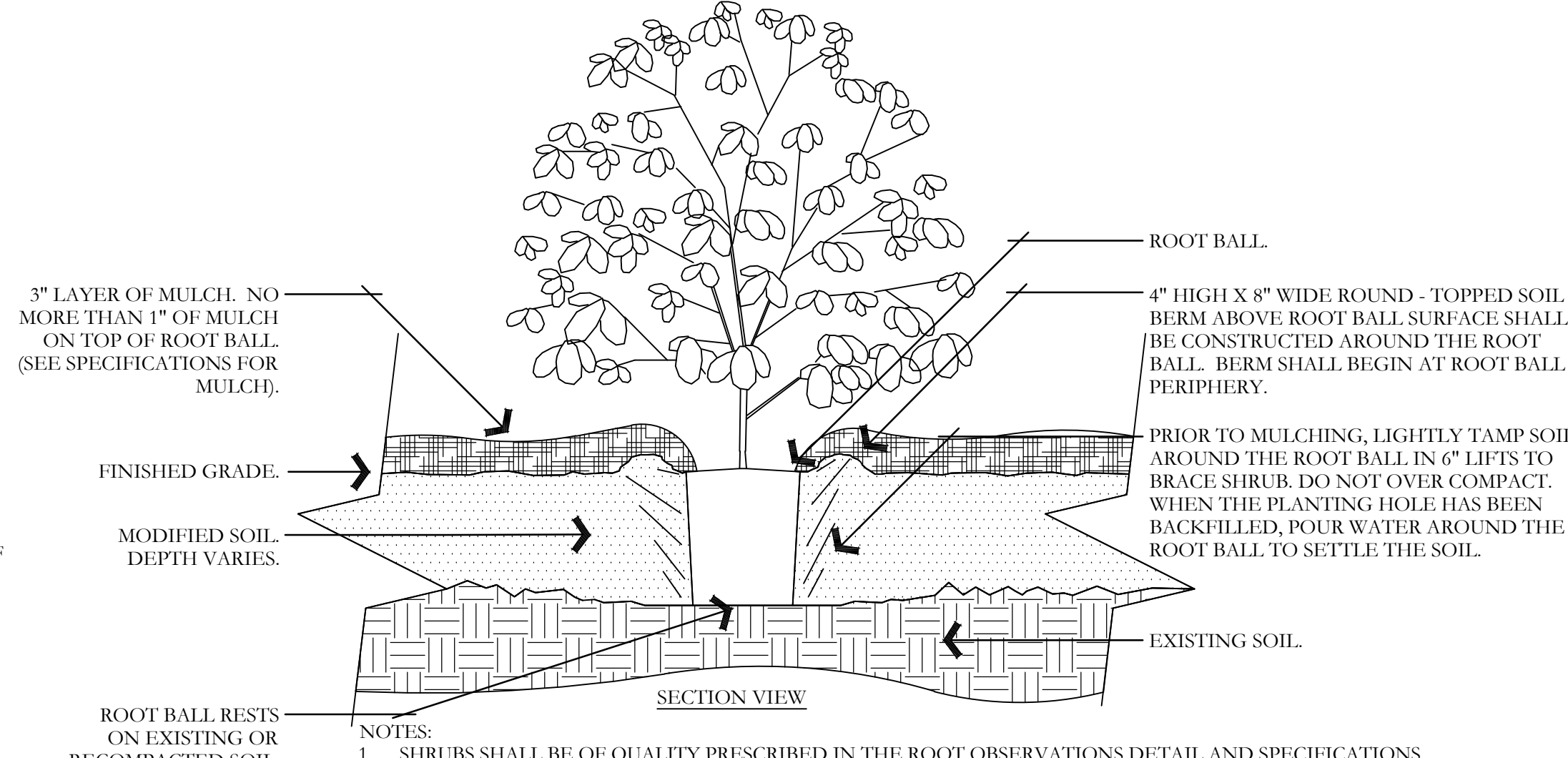
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D EVERGREEN TREE PLANTING

NOT TO SCALE

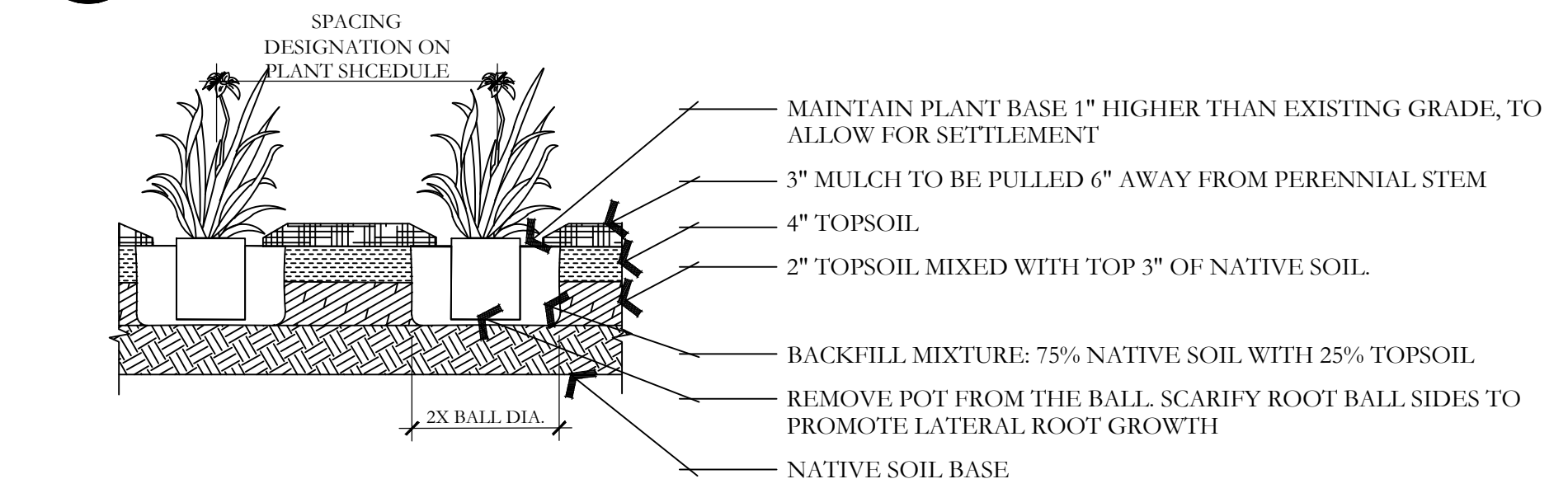
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E SHRUB - MODIFIED SOIL

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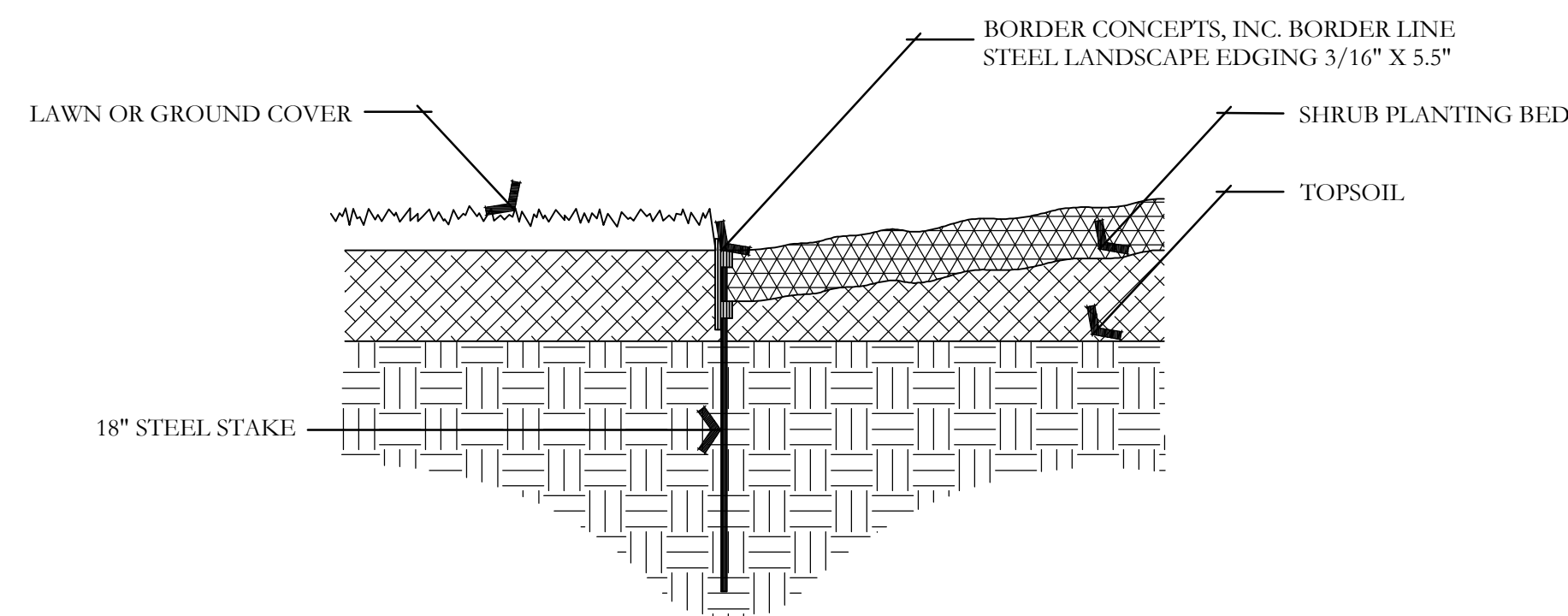
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F PERENNIAL PLANTING

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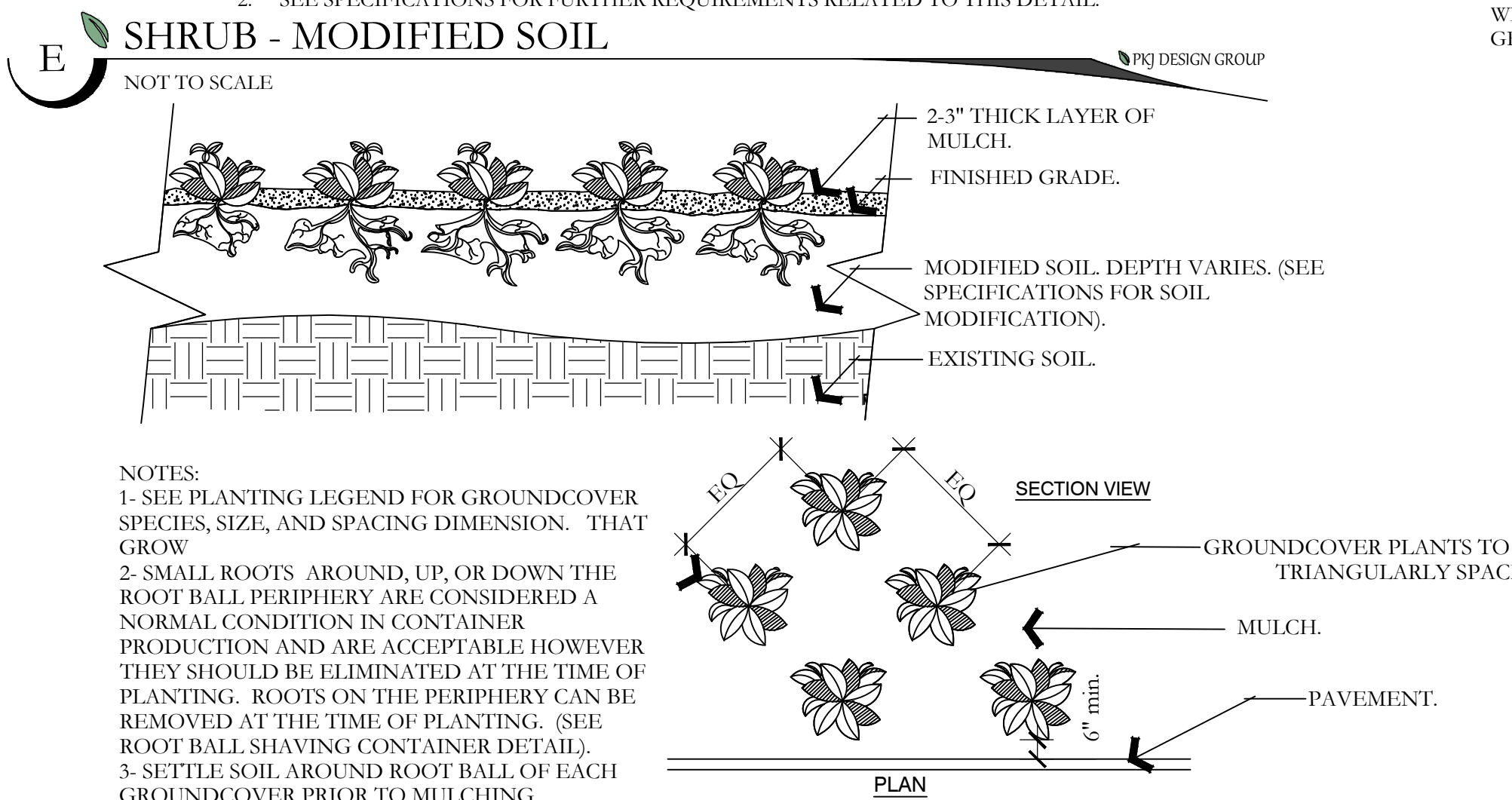
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G METAL EDGING DETAIL

NOT TO SCALE

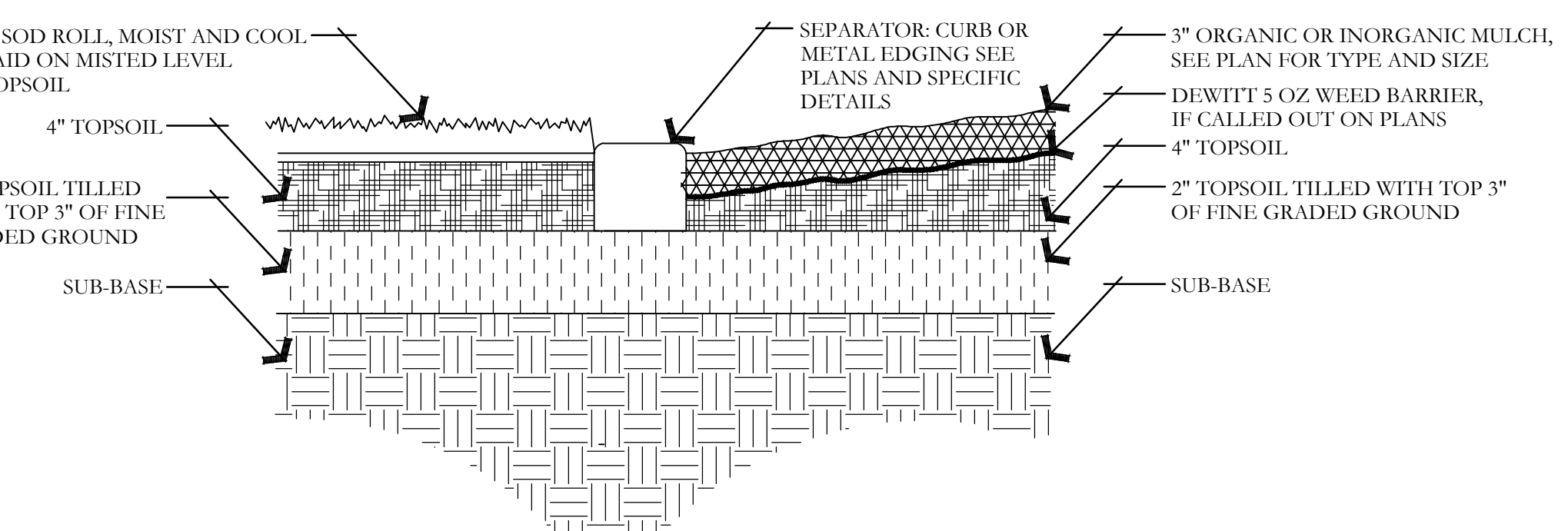
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H PERENNIAL/GROUNDCOVER PLANTING

NOT TO SCALE

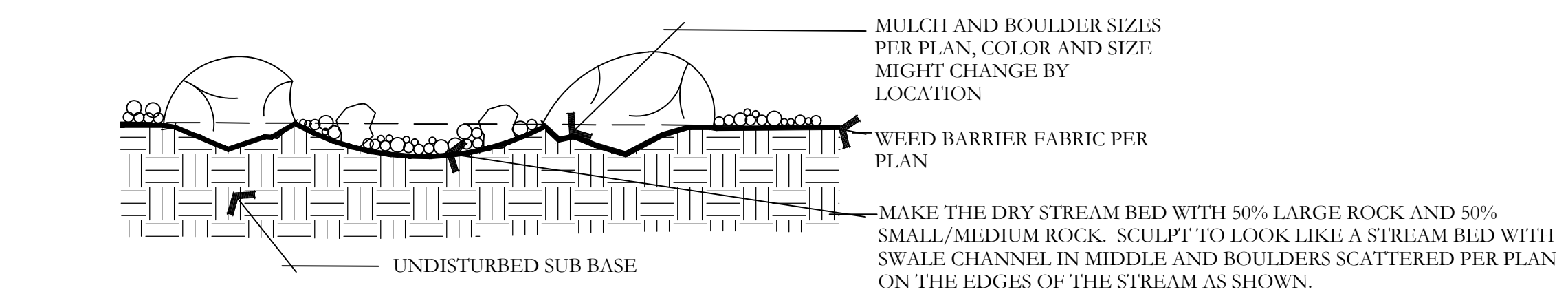
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I SOD LAYING/MULCH DETAIL

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J BOULDER AND DRY STREAM BED DETAIL

NOT TO SCALE

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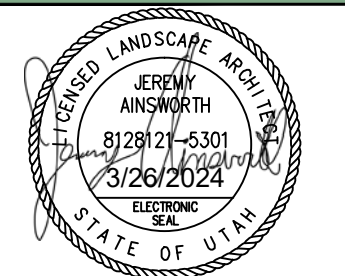
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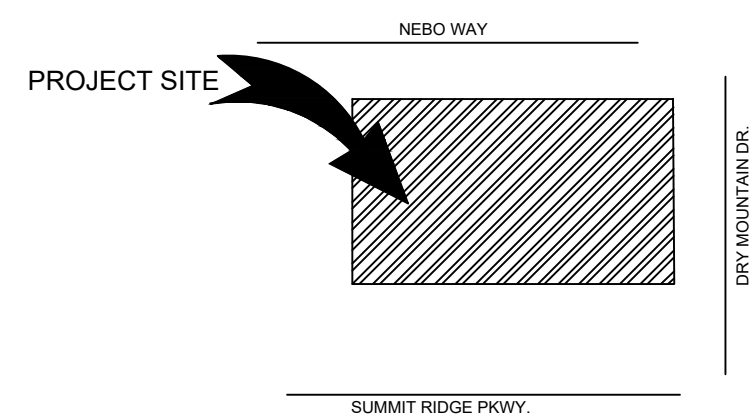
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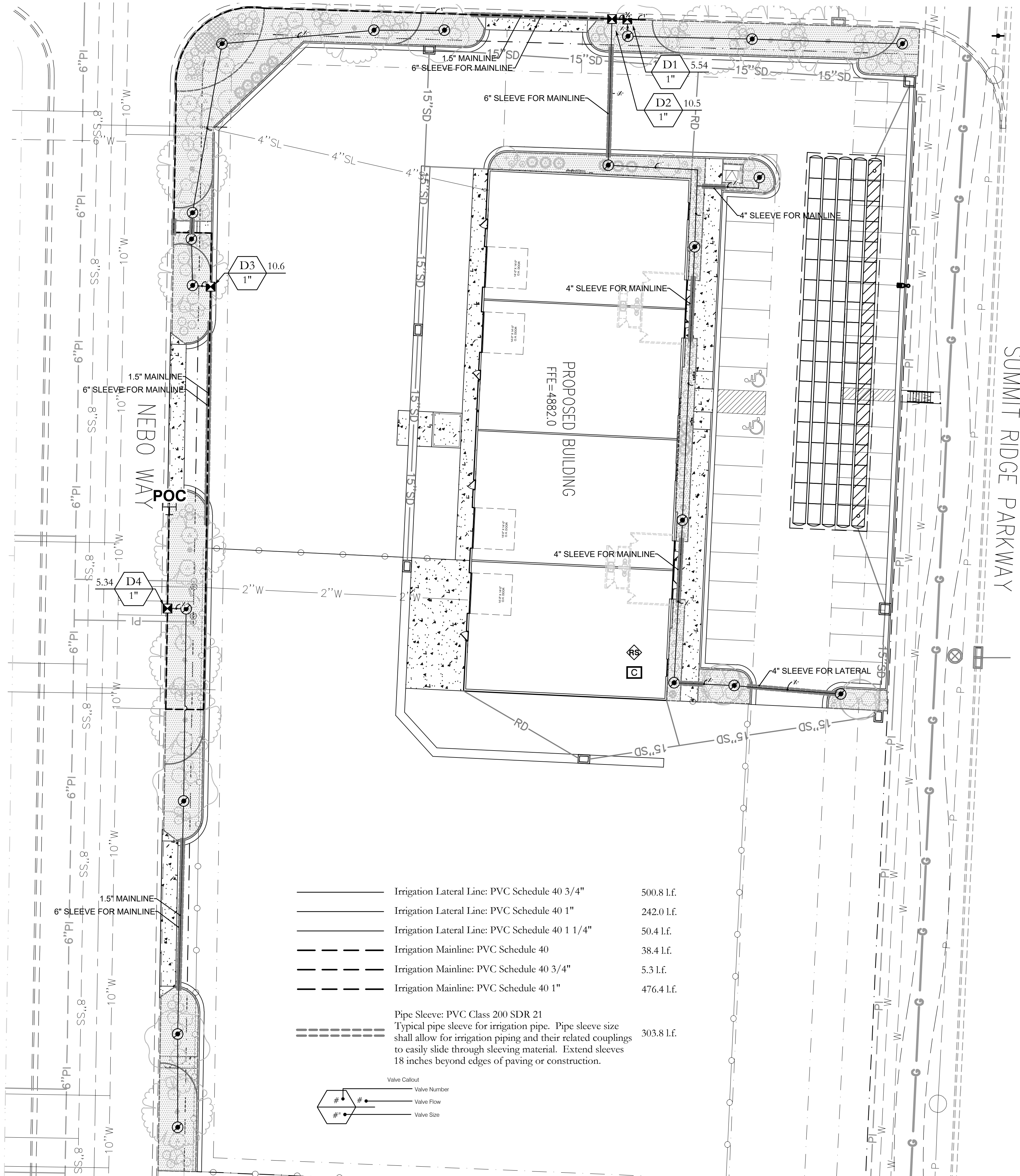
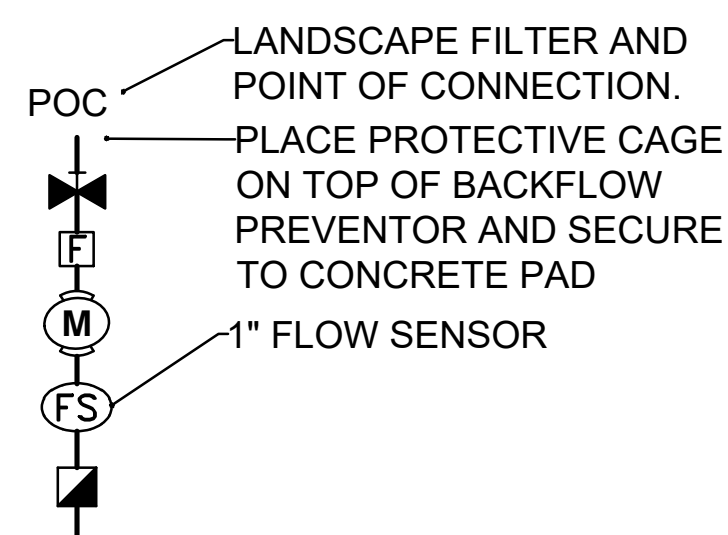
LANDSCAPE DETAILS
CITY PERMIT SET

LP-501

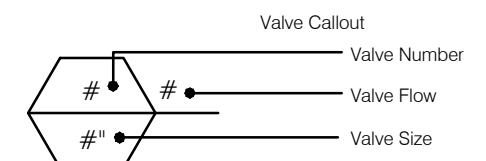
VICINITY MAP



P.O.C. CONFIGURATION



—	Irrigation Lateral Line: PVC Schedule 40 3/4"	500.8 l.f.
—	Irrigation Lateral Line: PVC Schedule 40 1"	242.0 l.f.
—	Irrigation Lateral Line: PVC Schedule 40 1 1/4"	50.4 l.f.
—	Irrigation Mainline: PVC Schedule 40	38.4 l.f.
—	Irrigation Mainline: PVC Schedule 40 3/4"	5.3 l.f.
—	Irrigation Mainline: PVC Schedule 40 1"	476.4 l.f.
—	Pipe Sleeve: PVC Class 200 SDR 21 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	303.8 l.f.



IRRIGATION LEGEND

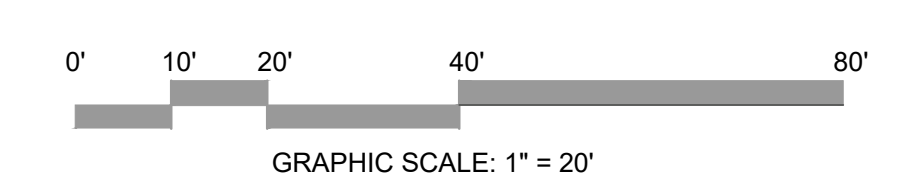
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
☒	Rain Bird XCZ-100-IVMQ (2) 1" Wide Flow IVM Drip Control Kit for Commercial Applications. 1in. Ball Valve with 1in. PESBIVM Smart Valve w/ factory installed IVM-SOL 0.3-20 gpm and 1in. Pressure Regulating 40psi Quick-Check Basket Filter 0.3-20 gpm	4
⊙	Pipe Transition Point above grade Pipe transition point from PVC lateral to drip tubing with riser to above grade installation.	20
▨	Area to Receive Drip Emitters Rain Bird PC (2) Single Outlet, Pressure Compensating Drip Emitters with Self-Piercing Barb Inlet. Flow rate: 5 GPH=light brown; 7 GPH=violet; 10 GPH=green; 12 GPH=dark brown; 18 GPH=white; 24 GPH=orange. Emitter Notes: PC-05 emitters (1 assigned to each flat plant) PC-05 emitters (1 assigned to each 4" pot plant) PC-05 emitters (1 assigned to each 1 gal plant) PC-05 emitters (1 assigned to each 2 gal plant) PC-05 emitters (2 assigned to each 3 gal plant) PC-05 emitters (2 assigned to each 5 gal plant) PC-05 emitters (3 assigned to each 15 gal plant) PC-05 emitters (3 assigned to each 20 gal. plant) PC-05 emitters (3 assigned to each B & B, 1.25" Cal plant) PC-05 emitters (3 assigned to each B & B, 2" Cal plant) PC-05 emitters (3 assigned to each B & B, 4-6' plant) PC-05 emitters (3 assigned to each B & B, 5'-6' plant) PC-05 emitters (3 assigned to each B & B, 6' plant) PC-05 emitters (3 assigned to each B & B, 7'-9' plant) PC-05 emitters (3 assigned to each B & B, 8'-10' plant) PC-05 emitters (4 assigned to each B & B, Multi-trunked plant) PC-05 emitters (4 assigned to each Bulb plant) PC-05 emitters (4 assigned to each Plug plant)	8,011 s.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
☒	Rain Bird 44-RC 1" 1in. Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Thermoplastic Rubber Cover, and 2-Piece Body.	1
✕	Shut Off Valve	1
Ⓜ	Rain Bird EFB-CP-PRS-D 1" 1in., 1-1/4", 1-1/2in., 2in. Brass Master Valve, that is Contamination Proof w/Self-Flushing Filter Screen. Globe Configuration, Reclaimed Water Compatible, and Purple Handle Cover Designates Non-Potable Water Use. With Pressure Regulator.	1
☐	Rain Bird ESPLXIVM 60 Station, 2-Wire Controller w/ Smart Valve Technology. (1) ESPLXIVM 60-Station, Indoor/ Outdoor, Plastic Wall-Mount Cabinet. System Requirements: Rain Bird LXIVM-XXX Integrated Valve Modules & 2-Wire Devices. Use Paige Electric Cable P7072D & Rain Bird WC20 Dry Splices ONLY. Ground System w/ (X) LXIVMSD Surge Device in Rain Bird Round Valve Boxes. Install Per Manufacturers Recommendations.	1
Ⓢ	Rain Bird WR2-RC Wireless Rain Sensor Combo, includes 1 receiver and 1 rain sensor transmitter.	1
Ⓢ	Rain Bird FS-200-B 2in. Flow Sensor, Brass Model. Suggested Operating Range 10 GPM to 100 GPM. Size for Flow Not According to Pipe Size. Rain Bird Compatible Controllers: ESP-LXIVM(P) LXI LXME2(P) ME3, or Controllers Accepting Custom K-Factor and Offset. Install in Rain Bird Valve Box.	1
☐	Amiad 2-T-S-SCAN-Steel Screen 200mm Amiad 2in. T-Super Scanaway Manual Plastic Filter, NPT thread, Steel Screen Element, Clogging Indicator Kit. Engineered-plastic material, maximum working pressure 145psi.	1
☐	Point of Connection 2"	1

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JMA
3/26/2024

IRRIGATION PLAN SPECIFICATIONS

IRRIGATION SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

Work to be done includes all labor, materials, equipment and services required to complete the Project irrigation system as indicated on the Construction Drawings, and as specified herein. Includes but is not limited to: Furnishing and installing underground and above ground sprinkler system complete with any accessories necessary for proper function and operation of the system. All plant material on the Project shall be irrigated. Remove and dispose of any existing sprinkler system components which are disturbed during the construction process and are not to be saved. Restoration of any altered or damaged existing landscape to original state and condition.

1.2 SYSTEM DESCRIPTION

A.Design of Irrigation Components: Locations of irrigation components on Construction Drawings may be approximate. Piping, sleeving and/or other components shown on Construction drawings may be shown schematically for graphic clarity and demonstration of component groupings and separations. All irrigation components shall be placed in landscaped areas, with the exception of pipe and wire in sleeving under hardscapes. Actual routing of pipe, wire or other components may be altered due to site conditions not accounted for in the design process.

B.Construction requirements: Actual placement may vary as required to achieve a minimum of 100% coverage without overspray onto hardscapes, buildings or other features.

C.Layout of Irrigation Components: During layout and staking, consult with Owner Approved Representative (hereinafter referred to as OAR) to verify proper placement of irrigation components, and to provide Contractor recommendations for changes where revisions may be advisable. Small or minor adjustments to system layout are permissible to avoid existing field obstructions such as utility boxes or street light poles. Contractor shall place remote control valves in groups as practical to economize on quantity of manifold isolation valves. Quick coupler valves shall be placed with manifold groups and protected by manifold isolation valves. Quick coupler valves are shown on Construction Documents in approximate locations.

1.3 DEFINITIONS

A.Water Supply: Secondary water piping and components, furnished and installed by others to provide irrigation water to this Project, including but not limited to filter, saddle, nipples, spools, shut-off valves, corporation stop valves, water meters, pressure regulation valves, and piping upstream of (or prior to) the Point of Connection.

B.Point of Connection: Location where the Contractor shall tie into the water supply. May require filter, saddle, nipples, spools, isolation valves or Stop and Waste valve for landscape irrigation needs and use.

C.Main Line Piping: Pressurized piping downstream of the Point of Connection to provide water to remote control valves and quick couplers. Normally under constant pressure.

D. Lateral Line Piping: Circuit piping downstream of remote control valves to provide water to sprinkler heads, drip systems or bubblers.

1.4 REFERENCES

A.The following standards will apply to the work of this Section:

- a. ASTM - American Society for Testing and Materials
- b. IA - The Irrigation Association: Main BMP Document, Landscape Irrigation Scheduling and Water Management Document.

1.5 SUBMITTALS

A.At least thirty (30) days prior to ordering of any materials, the Contractor shall provide manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system. Submittals shall be in three ring binders or other similar bound form. Provide five copies of submittals to OAR for distribution. Place cover or index sheet indicating order in submittal document. No material shall be ordered, delivered or any work proceeded in the field until the required submittals have been reviewed in its entirety and stamped approved. Delivered material shall match the approved samples.

B.Operation and Maintenance Manual:

- a. At least thirty (30) days prior to final inspection, the Contractor shall provide Operation and Maintenance manual to OAR, containing:
 - i. Manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system.
 - ii. Parts list for each operating element of the system
 - iii.Manufacturer printed literature on operation and maintenance of operating elements of the system.

iv.Section listing instructions for overall system operation and maintenance. Include directions for Spring Start-up and Winterization.

b. Project Record Copy

- i. Maintain at project site one copy of all project documents clearly marked "Project Record Copy". Mark any deviation in material installation on Construction drawings. Maintain and update drawing at least weekly. Project Record Copy to be available to OAR on demand.
- ii. Completed Project As-Built Drawings

1. Prior to final inspection, prepare and submit to OAR accurate as-built drawings
2. Show detail and dimension changes made during installation. Show significant details and dimensions that were not shown in original Contract Documents.
3. Field dimension locations of sleeving, points of connection, main line piping, wiring runs not contained in main line pipe trenches, valves and valve boxes, quick coupler valves.
4. Dimensions are to be taken from permanent constructed surfaces, features, or finished edges located at or above finished grade.
5. Controller Maps upon completion of system, place in each controller a color coded copy of the area that controller services: indicating zone number, type of plant material and location on project that zone services. Laminate map with heat shrink clear plastic.

1.6 QUALITY ASSURANCE

- A.Acceptance: Do not install work in this section prior to acceptance by OAR.
- B.Regulatory Requirements: All work and materials shall be according to any and all rules, regulations or codes, whether they are State or Local laws and ordinances. Contract documents, drawings or specifications may not be construed or interpreted to permit work or materials not conforming to the above codes.
- C.Adequate Water Supply: Water supply to this Project exists, installed by others. Connections to these supply lines shall be by this Contractor. Verify that proper connection is available to supply line and is of adequate size. Verify that secondary connection components may be installed if necessary. Perform static pressure test prior to commencement of work. Notify OAR in writing of problems encountered prior to proceeding.

- D. Workmanship and Materials:
 - a. It is the intent of this specification that all material herein specified and shown on the construction documents shall be of the highest quality available and meeting the requirements specified.
 - b. All work shall be performed in accordance with the best standards of practice relating to the trade.

E.Contractors Qualifications:

- a. Contractor shall provide document or resume including at least the following items:
 - i. That Contractor has been installing sprinklers on commercial projects for five previous consecutive years.
 - ii. Contractor is licensed to perform Landscape and Irrigation construction in the State of this Project.
 - iii. Contractor is bondable for the work to be performed.
 - iv. References of five projects of similar size and scope completed within the last five years. Three of the projects listed shall be local.
 - v. Listing of suppliers where materials will be obtained for use on this Project.
 - vi. Project site Foreman or Supervisor has at least five consecutive years of commercial irrigation installation experience. This person shall be a current Certified Irrigation Contractor in good standing as set forth by the Irrigation Association. This person shall be on Project site at least 75% of each working day.
 - vii. Evidence that Contractor currently employs workers in sufficient quantities to complete Project within time limits that are established by the Contract.
 - viii. All General laborers or workers on the Project shall be previously trained and familiar with sprinkler installation and have a minimum of one-year experience. Those workers performing tasks related to PVC pipe shall have certificates designed below.
- 1.7 DELIVERY-STORAGE-HANDLING

A.During delivery, installation and storage of materials for Project, all materials shall be protected from contamination, damage, vandalism, and prolonged exposure to sunlight. All material stored at Project site shall be neatly organized in a

compact arrangement and storage shall not disrupt Project Owner or other trades on Project site. All material to be installed shall be handled by Contractor with care to avoid breakage or damage. Damaged materials attributed to Contractor shall be replaced with new or Contractor's expense.

1.8 SEQUENCING

A.Perform site survey, research utility records, contact utility location services. The Contractor shall familiarize himself with all hazards and utilities prior to work commencement. Install sleeving prior to installation of concrete, paving or other permanent site elements. Irrigation system Point of Connection components, backflow prevention and pressure regulation devices shall be installed and operational prior to all downstream components. All main lines shall be thoroughly flushed of all debris prior to installation of any sprinkler heads.

1.9 WARRANTY

A.Contractors shall provide one year Warranty. Warranty shall cover all materials, workmanship and labor. Warranty shall include filling and/or repairing depressions or replacing turf or other plantings due to settlement of irrigation trenches or irrigation system elements. Valve boxes, sprinklers or other components settled from original finish grade shall be restored to proper grade. Irrigation system shall have been adjusted to provide proper, adequate coverage of irrigated areas.

1.10 OWNERS INSTRUCTION

A.After system is installed, inspected, and approved, instruct Owner's Representatives in complete operation and maintenance procedures. Coordinate instruction with references to previously submitted Operation and Maintenance Manual.

1.11 MAINTENANCE

- A.Furnish the following items to Owner's Representative:
 - a. Two quick coupler keys with hose w/valves.
 - b. One of each type or size of quick coupler valve and remote control valve. Five percent of total quantities used of each sprinkler and sprinkler nozzle.
- B. Provide the following services:
 - a. Winterize entire irrigation system installed under this contract. Winterize by 'blow-out' method using compressed air. Compressor shall be capable of minimum of 175 CFM. This operation shall occur at the end of first growing season after need for plant irrigation but prior to freezing. Compressor shall be capable of evacuating system of all water pressure regulation devices. Compressor shall be regulated to not more than 60 PSI. Start up system the following spring after danger of freezing has passed. Contractor shall train Owner's Representative in proper start-up and winterization procedure.

PART 2 - PRODUCTS

2.1 GENERAL NOTES

A.Contractors shall provide materials to be used on this Project. Contractor shall not remove any material purchased for this Project from the Project Site, nor mix Project materials with other Contractor owned materials. Owner retains right to purchase and provide project material.

2.2 POINT OF CONNECTION

A.The Contractor shall connect onto existing irrigation or water main line as needed for Point(s) of Connection. Contractor shall install new main line as indicated.

2.3 CONNECTION ASSEMBLY

A.Secondary water shall be used on this Project. Install filter and RPZ as needed.

2.4 CONTROL SYSTEM

- A.Power supply to the irrigation controller shall be provided for by this Contract.
- B.Controller shall be as specified in the drawings. Controller shall be surge protected.

- a. Installation of wall-mount/ground pedestal timer controllers: Irrigation contractor shall be responsible for this task. Power configuration for wall-mount/ground pedestal timer controllers shall be 120 VAC unless otherwise noted.
- b. Locate Controller(s) in general location shown on Construction drawings. Coordinate power supply and breaker allocation with electrical contractor. Contractor shall be responsible for all power connections to Controllers, whether they are wall mount or pedestal mount. Contractor shall coordinate with electrical or other Project trades as needed to facilitate installation of power to controllers.

C.Wires connecting the remote control valves to the irrigation controller are single conductors, type PE. Wire construction shall incorporate a solid copper conductor and polyethylene (PE) insulation with a minimum thickness of 0.045 inches. The wires shall be UL listed for direct burial in irrigation systems and be rated at a minimum of 30 VAC. Page Electric Co., LP specification number P7079D.

- a. A minimum of 24" of additional wire shall be left at each valve, each splice box and at each controller.
- b. Common wire shall be white in color, 12 gauge. Control wire shall be red in color, 14 gauge. Spare/extra wire (5 ft.) shall be looped within each valve box of the grouping it is to service.

D. RCV wire splicing connectors shall be 3M brand DBY or DBR. Wire splicing between controllers and valves shall be avoided if at all possible. Any wire splices shall be contained within a valve box. Splices within a valve box that contains no control valves shall be stamped WIRE SPLICE or WS" on box lid.

2.5 SLEEVING

A.Contractors shall be responsible to protect existing underground utilities and components. Sleeving minimum size shall be 2". Sleeving 2" through 4" in size shall be S/40 PVC solvent weld. Sleeving 6" and larger shall be CL 200 PVC gasketed. Sleeve diameter shall be at least two times the diameter of the pipe within the sleeve. Sleeves shall be extended 6" minimum beyond walk or edge of pavement. Wire or cable shall not be installed in the same sleeve as piping, but shall be installed in separate sleeves. Sleeve ends on sleeves 4" and larger shall be capped with integral corresponding sized PVC slip caps, pressure fit, until used, to prevent contamination. Sleeves shall be installed at appropriate depths for main line pipe or lateral pipe.

2.6 MAIN LINE PIPE

- A.All main line pipe 4" and larger shall be Class 200 gasketed bell end. All main line pipe 3" in size and smaller shall be Schedule-40 PVC solvent weld bell end.
 - a. Maximum flows allowed through main line pipe shall be:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM
 - b. Main line pipe shall be buried with 24" cover

2.7 MAIN LINE FITTINGS

A.All main line fittings 3" and larger shall be gasketed ductile iron material. All ductile iron fittings having change of direction shall have proper concrete thrust block installed. All main line fittings smaller than 3" in size shall be Schedule 80 PVC.

2.8 ISOLATION VALVES

- A.Isolation valves 3" and larger shall be Watertight brand model 2500 cast iron gate valve, resilient wedge, push on type, with 2" square operating nut. Place sleeve of 6" or larger pipe over top of valve vertically and then extend to grade. Place 10" round valve box over sleeve at grade.
- B.Isolation valves 2-1/2" and smaller shall be Apollo brand 70 series brass ball valves, contained in a Carson Standard size valve box. Valves shall be installed with S/80 PVC TOE. Nipples on both sides of the valve. Valve shall be placed so that the handle is vertical toward the top of the valve box in the 'off' position.

2.9 MANIFOLDS

A.Action Manifold fittings shall be used to create unions on both sides of each control valve, allowing the valve to be removed from the box without cutting piping. Valves shall be located in boxes with ample space surrounding them to allow access for maintenance and repair. Where practical, group remote control valves in close proximity, and protect each grouping with a manifold isolation valves as shown in details. Manifold Main Line (or Sub-Main Line) and all manifold components and isolation valves shall be at least as large as the largest diameter lateral served by the respective manifold.

2.10 REMOTE CONTROL VALVES

A.Remote control valves shall be as specified on the drawings. Remote control valves shall be located separately and individually in separate control boxes.

2.11 MANUAL CONTROL VALVES

A.Quick coupler valve shall be attached to the manifold sub-main line using a Lasco G178212 swing joint assembly with snap-lock outlet and brass stabilizer elbow. Quick coupler valve shall be placed within a Carson 10" round valve box. Top of quick coupler valve cover shall allow for complete installation of valve box lid, but also allow for insertion and operation of key. Base of quick coupler valve and top of quick coupler swing joint shall be encased in 3/4" gravel. Contractor shall not place quick coupler valves further than 200 feet apart, to allow for spot watering or supplemental irrigation of new plant material. Quick coupler valve at POC shall not be eliminated or relocated.

2.12 LATERAL LINE PIPE

A.All lateral piping shall be Schedule 40 PVC, solvent weld, and bell end. Lateral pipe shall be buried with 12-18" of cover typically. Lateral pipe shall be 3/4", 1", 1 1/4", 1 1/2" or 2" in size as indicated on Construction Drawings.

2.13 LATERAL LINE FITTINGS

A.All lateral line fittings shall be S/40 PVC

2.14 SPRAY SPRINKLERS

A.Spray head sprinklers shall be as specified on the drawings. Nozzles shall be as specified on the drawings.

2.15 VALVE BOXES

A. Rainfed valve boxes shall be used on this project. Sites are as directed in these Specifications, detail sheets or plan sheets. Valve boxes shall be centered over the control valve or element they cover. Valve box shall be sized large enough to allow ample room for services access, removal or replacement of valve or element. Valve box shall be set to flush to finish grade of topsoil or harked areas. Contractor shall provide extensions or stack additional valve boxes as necessary to bring valve box pit to proper grade.

2.16 IMPORT BACKFILL

A.All main line pipe, lateral line pipe and other irrigation elements shall be bedded and backfilled with clean soil, free of rocks 1" and larger. Contractor shall furnish and install additional backfill material as necessary due to rocky conditions. Trenches and other elements shall be compacted and/or water settled to eliminate settling. Debris from trenching operations unusable for fill shall be removed from project and disposed of properly by Contractor.

2.17 OTHER PRODUCTS

A.Substitution of equivalent products is subject to the OAR's approval and must be designated as accepted in writing.

- a. The Contractor shall provide materials to make the system complete and operational.

PART 3 - EXECUTION

3.1 PREPARATION

A.Contractors shall repair or replace work damaged by irrigation system installation. If damaged work is new, repair or replacement shall be performed by the original installer of that work. The existing landscape of this Project shall remain in place. Contractor shall protect and work around existing plant material. Coordination of trench and valve locations shall be laid out for the OAR prior to any excavation occurring. Plant material deemed damaged by the OAR shall be replaced with new plant material at Contractor's expense. Contractor shall not cut existing tree roots larger than 2" to install this Project. Route pipe, wire, and irrigation elements around tree canopy drip line to minimize damage to tree roots. Contractor shall have no part of existing system to be added by other portions of site landscape without water for more than 24 hours at a time.

3.2 TRENCHING AND BACKFILLING

A.All piping and fittings shall not be permitted on this project. Over excavate trenches both in width and depth. Ensure base of trench is rock or debris free to protect pipe and wire. Grade trenches have to ensure that, even support of piping. Backfill with clean soil or import material. Contractor shall backfill no less than 2" around entire pipe with clean, rock free fill. Main line piping and fittings shall not be backfilled until OAR has inspected and pipe has passed pressure testing. Perform balance of backfill operation to eliminate any settling.

3.3 SLEEVING

A.Sleeve all piping and wiring that pass under paving or hardscape features. Wiring shall be placed in separate sleeving from piping. Sleeves shall be positioned relative to structures or obstructions to allow for pipe or wire within to be removed if necessary.

3.4 GRADES AND DRAINAGE

A.Place irrigation pipe and other elements at uniform grades. Winterization shall be by evacuation with compressed air. Automatic drains shall not be installed on this Project. Manual drains shall only be installed at POC where designated on Construction Drawings.

3.5 PVC PIPE

- A.Install pipe to allow for expansion and contraction as recommended by pipe manufacturer.
- B.Install main line pipes with 18" of cover, lateral line pipes with 12" of cover.
- C.Drawings show diagrammatic or conceptual location of piping - Contractor shall install piping to minimize change of direction, avoid placement under large trees or large shrubs, avoid placement under hardscape features.
- D. Plastic pipe shall be cut squarely. Bars shall be removed. Spigot ends of pipes 3" and larger shall be beveled.
- E.Pipe shall not be glued unless ambient temperature is at least 50 degrees F. Pipe shall not be glued in rainy conditions unless properly tented. All solvent weld joints shall be assembled using IPS 711 glue and P70 primer according to manufacturer's specification, no exceptions. All workers performing glue operations shall provide evidence of certification. Glued main line pipe shall cure a minimum of 24 hours prior to being energized. Lateral lines shall cure a minimum of 2 hours prior to being energized and shall not remain under constant pressure unless cured for 24 hours.
- F.Appropriate thrust blocking shall be performed on fittings 3" and larger. All threaded joints shall be wrapped with Teflon tape or paste unless directed by product manufacturer or sealing by o-ring.

3.6 CONTROLLERS

- A.All grounding for pedestal controllers shall be as directed by controller manufacturer and ASCE guidelines, not to exceed a resistance reading of 5 OHMS.
- B. Locate controllers in protected, inconspicuous places, when possible. Coordinate location of pedestal controllers with Landscape Architect to minimize visibility.
- C. Coordinate location of wall mount controllers with building or electrical contractor to facilitate electrical service and future maintenance needs. Wall mount shall be securely fastened to surface. If exterior mounted, wall mount controllers shall have electrical service wire and field control wire in separate, appropriate sized weatherproof electrical conduit, PVC pipe shall not be used.
- D. Wiring under hardscape surfaces shall be placed continuously in conduit. Contractor shall be responsible to coordinate sleeving needs for conduit or sweeps elbows from exterior to interior of building.

E.Pedestal controllers shall be placed upon VIT-Strong Box Quick Pad as per manufacturer's recommendations. Controllers shall be oriented such that Owner's Representative maintenance personnel may access easily and perform field system tests efficiently.

F.Place Standard valve box at base of controller or nearby to allow for three to five feet of slack field control wire to be placed at each controller. This Contractor shall provide conduit access if needed for Electrical Contractor. Electrical supply and installation, as well as hook-up to controller shall be by this Contractor.

G. Electrical contractor is in charge of providing 1.5" conduit from controller to outside landscape area. Provide power and room for controller. Provide ethernet to hardware power into the controller.

3.7 VALVES

- A.Isolation valves, remote control valves, and quick coupler valves shall be installed according to manufacturer recommendation and Contract Specifications and Details.
- B.Valve boxes shall be set over valves so that all parts of the valve can be reached for service.
- C.Valve box and lid shall be set to be flush with finished grade. Only one remote control valve may be installed in a valve box. Place a minimum of 4" of 3/4" washed gravel beneath valve box for drainage. Bottom of remote control valve shall be a minimum of 2" above gravel.

3.8 SPRINKLER HEADS

- A.No sprinkler shall be located closer than 6" to walls, fences, or buildings.
- B.Heads adjacent to walks, curbs, or paths shall be located at grade and 2" away from hardscape.
- C. Control valves shall be opened. Then fully flush lateral line pipe and swing joints prior to installation of sprinklers.
- D. Spray heads shall be installed and flushed again prior to installation of nozzles.
- E. Contractor shall be responsible for adjustment if necessary due to grade changes during landscape construction.

3.9 FIELD QUALITY CONTROL

- A.Main line pipes shall not be backfilled or accepted until the system has been tested for 2 hours at 100 psi.
- B.Main line pressure test shall include all pipe and components from the point of connection to the upstream side of remote control valves. Test shall include all manifold components under constant pressure. Piping may be tested in

sections that can be isolated.

C.Contractors shall provide pressurized water pump to increase or boost pressure where existing static pressure is less than 100 psi.

D. Schedule testing with OAR 48 hours in advance for approval.

E. Leaks or defects shall promptly be repaired or rectified at the Contractor's expense and retested until able to pass testing.

F. Grounding resistance at pedestal controller shall also be tested and shall not exceed 5 OHMS.

3.10 ADJUSTMENT

A.Sprinkler heads shall be adjusted to proper height when installed. Changes in grade or adjustment of head height after installation shall be considered a part of the original contract and at Contractor's expense.

B. Adjust all sprinkler heads for arc, radius, proper trim and distribution to cover all landscaped areas that are to be irrigated.

C. Adjust sprinklers so they do not water buildings, structures, or other hardscape features.

D. Adjust run times of station to meet needs of plant material the station services.

3.11 CLEANING

- A.Contractors shall be responsible for cleanliness of jobsite. Work areas shall be swept cleanly and picked up daily.
- B. Open trenches or hazards shall be protected with yellow caution tape.
- C. Contractor is responsible for removal and disposal of offsite trash and debris generated as a result of this Project.

D. OAR shall perform periodic as well as a final cleanliness inspection.

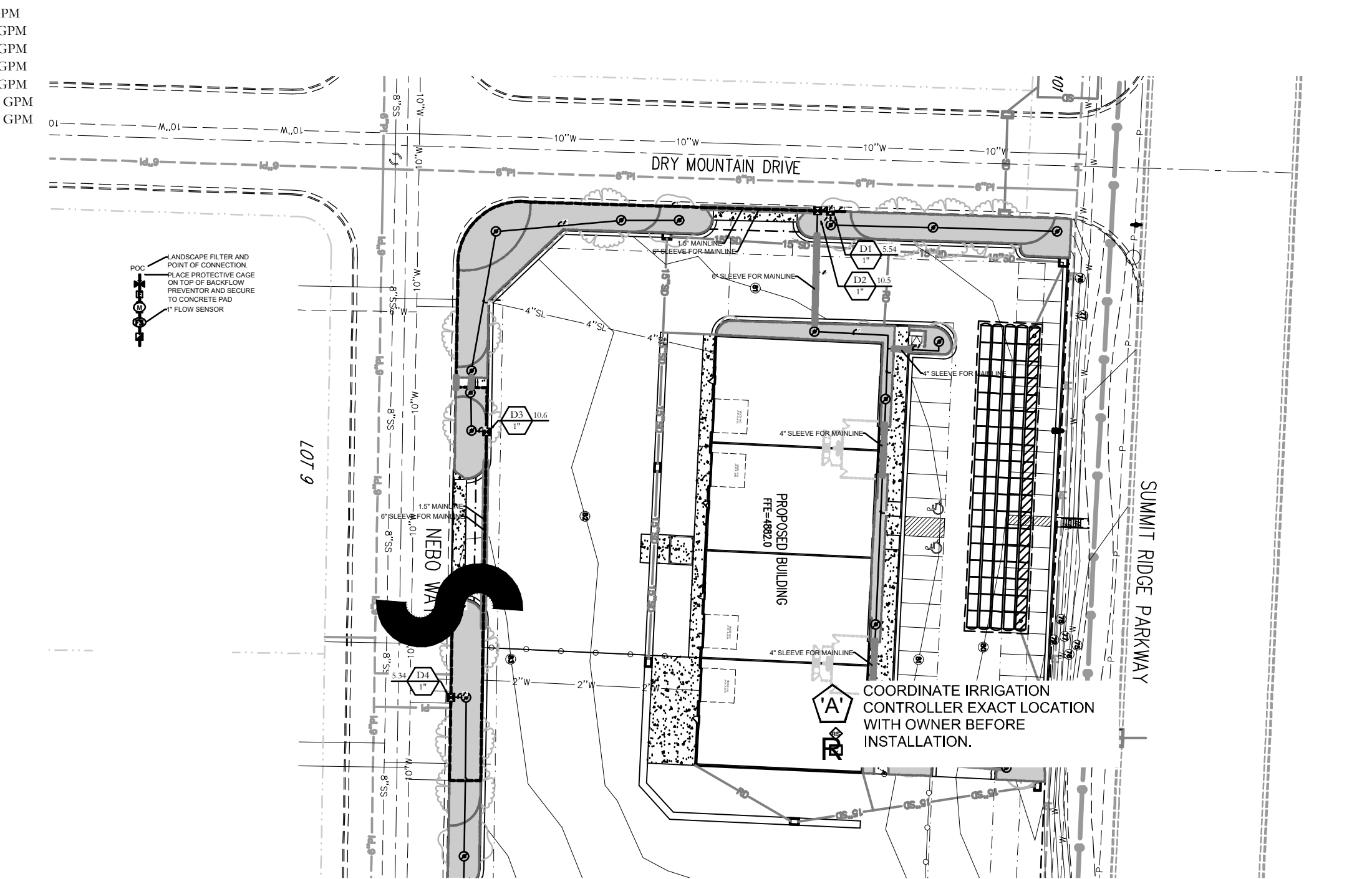
E. Contractor shall leave Project in at least a 'broom clean' condition.

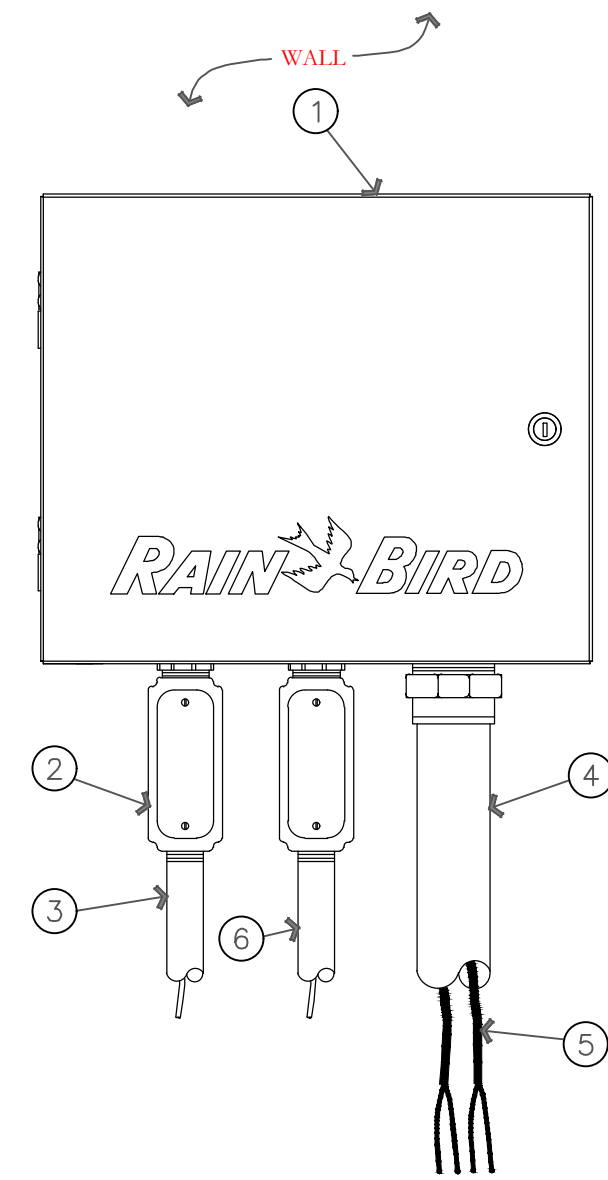
END OF SECTION

IRRIGATION NOTES

1. BEFORE WORK IS TO COMMENCE, BLUE STAKES/DIG LINE IS TO BE CALLED AND NOTIFIED. IF ANY DAMAGE TO UTILITIES HAPPEN DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR IT AT THEIR EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS IN ACCORDANCE WITH CITY AND/OR COUNTY CODES AND COMPLY WITH SPECIFICATIONS AND DRAWINGS.
3. INVESTIGATE TO MAKE SURE THAT THE IRRIGATION SYSTEM IS, IN FACT, BEING CONNECTED TO A SECONDARY SYSTEM. IF IT IS NOT CONNECTED TO SECONDARY, CONTACT THE OWNER AND LANDSCAPE ARCHITECT TO COORDINATE A CULINARY SYSTEM AND REQUIRED COMPONENTS. FUNCTIONING AMMAD FILTER IS TO BE USED AT THE POINT OF CONNECTION.
4. VERIFY THAT THE POINT OF CONNECTION IS IN THE CORRECT LOCATION BEFORE INSTALLATION. ALL CONNECTIONS ON THIS PROJECT ARE TO SECONDARY WATER AND SHOULD BE NOTED AS SUCH; THEREFORE, ALL PARTS MUST MEET WATER STANDARDS THAT PERTAIN TO SECONDARY WATER USE: PURPLE VALVE BOXES FOR SECONDARY WATER SYSTEMS.
5. ON OCCASION AND FOR GRAPHIC PURPOSES ONLY, THE IRRIGATION SYSTEM MIGHT BE SHOWN IN HARDSCAPE AREAS. THIS IRRIGATION IS TO BE PLACED IN LANDSCAPED AREAS ON THE PROPERTY SITE.
6. CONTRACTOR SHALL USE ONLY COMMERCIAL-GRADE IRRIGATION PRODUCTS. THIS INCLUDES PIPE TO BE SCHEDULE 40 PVC OR BETTER. NO POLY PIPE IS TO BE USED. FITTINGS UP TO 1-1/2" MUST BE SCHEDULE 40 OR BETTER. FITTINGS LARGER THAN 1-1/2" SHALL BE SCHEDULE 80 OR BETTER. CONTRACTOR IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION.
7. MAIN LINES SHALL BE A MINIMUM OF 24" DEEP AND LATERAL LINES A MINIMUM OF 12" DEEP. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES. TRENCHING BACKFILL MATERIAL SHALL BE COMPACTED TO PROPER FINISHED GRADE.
8. NO IRRIGATION MAIN LINE MAY BE LOCATED WITHIN 3 FEET OF ANY STRUCTURE.
9. TO AVOID PIPE DAMAGE, ADJUST LOCATION OF PIPE TO NOT BE DIRECTLY UNDER PLANT MATERIALS. VALVE BOXES ARE PREFERRED TO BE IN PLANTER BEDS INSTEAD OF THE LAWN. SYSTEM IS TO BE WINTERIZED IN THE LATE FALL.
10. PLANS INDICATES 14" OR BETTER HEAD TO HEAD COVERAGE. SHOULD CONTRACTOR FIND DISCREPANCIES DUE TO NECESSARY FIELD ADJUSTMENTS, CONTACT LANDSCAPE ARCHITECT FOR IRRIGATION CORRECTION.
11. DRIP IRRIGATION IS TO BE INSTALLED PER DETAILS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS. TUBING SHOULD REST TOWARD OUTER EDGE OF ROOTBALL AND NOT AGAINST TRUNK OF PLANT.
12. A QUICK COUPLER SHALL BE INSTALLED AT POINT OF CONNECTION TO ALLOW BLOW OUT OF SYSTEM BY AIR COMPRESSOR AT END OF EACH SEASON.
13. INSTANT SLEEVES FOR ALL PIPES AND WIRE CONDUIT THAT ARE PLACED UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE BEING PLACED INTERNALLY. WIRE CONDUIT SHALL BE INSTALLED IN CLASS 200 PIPE. AT ANY DIRECTIONAL CHANGE THAT OCCURS, A JUNCTION BOX IS TO BE PLACED.
14. CONDUITS CAN NOT BE SHARED BY WATER AND ELECTRICAL LINES. ALL WIRE TO BE PUT IN PVC CONDUIT. ALL WIRE CONNECTIONS TO BE PLACED IN A VALVE BOX. ALL WIRE CONNECTIONS TO USE WATERPROOF WIRE CONNECTORS WITH AT LEAST 3" OF EXTRA WIRE. PROVIDE PLENTY OF EXTRA WIRE AT EVERY DIRECTIONAL CHANGE. INSULATED 14 GAUGE COPPER TO BE USED FOR ALL CONTROL WIRES AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
15. CONTRACTOR TO INSTALL LIGHTNING ARRESTOR AND GROUNDING RODS ON SITE PER MANUFACTURER'S RECOMMENDATIONS, SEE DETAILS.
16. CONTRACTOR TO SEPARATE SYSTEM (CONTROLLER, VALVES, AND DIFFERENT COLORED WIRE) FROM CITY MAINTAINED PROPERTY AND HOA/OWNER MAINTAINED PROPERTY.
17. DUCT TAPE ALL SLEEVES TO PREVENT SOIL OR OTHER DEBRIS ENTERING PIPE. IDENTIFY ALL SLEEVES BY WOOD OR PVC STAKES AND SPRAY PAINT WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
18. TO PREVENT EROSION AND LOW POINT DRAINAGE CONTRACTOR SHALL INSTALL CHECK VALVES.
19. LOCATE PAVEMENT HIGHS NO CLOSER THAN 6" FROM WALLS, FENCES OR BUILDINGS AND 2" AWAY FROM WALKS, PATHS OR CURBS.
20. PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING. CONTACT LANDSCAPE ARCHITECT/OWNER AT THIS TIME FOR COMPLIANCE.
21. CONTRACTOR TO CONSULT WITH OWNER ON EXACT LOCATION OF CONTROLLER. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR AND OWNER FOR THE POWER SUPPLY. INSTALL ALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH THE CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.
22. LATERAL LINES SHALL BE NO SMALLER THAN 3/4". LANDSCAPE CONTRACTOR TO ENSURE THE FOLLOWING PIPE SIZES DO NOT EXCEED THE SUGGESTED GPM LISTED BELOW:

I	3/4"	8 GPM
II	1"	12 GPM
III	1-1/2"	30 GPM
IV	2"	53 GPM
V	2-1/2"	75 GPM
VI	3"	110 GPM
VII	4"	180 GPM





- 1 TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXIVM/PRO IN LXMM METAL CABINET WITH OUTSIDE WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
- 2 JUNCTION BOX
- 3 1-INCH CONDUIT AND FITTINGS FOR POWER SUPPLY WIRE
- 4 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
- 5 MAXICABLE TWO-WIRE PATH TO FIELD DEVICES, USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
- 6 1-INCH CONDUIT AND FITTINGS FOR GROUND WIRE. ONLY FOR OUTDOOR INSTALLATIONS.

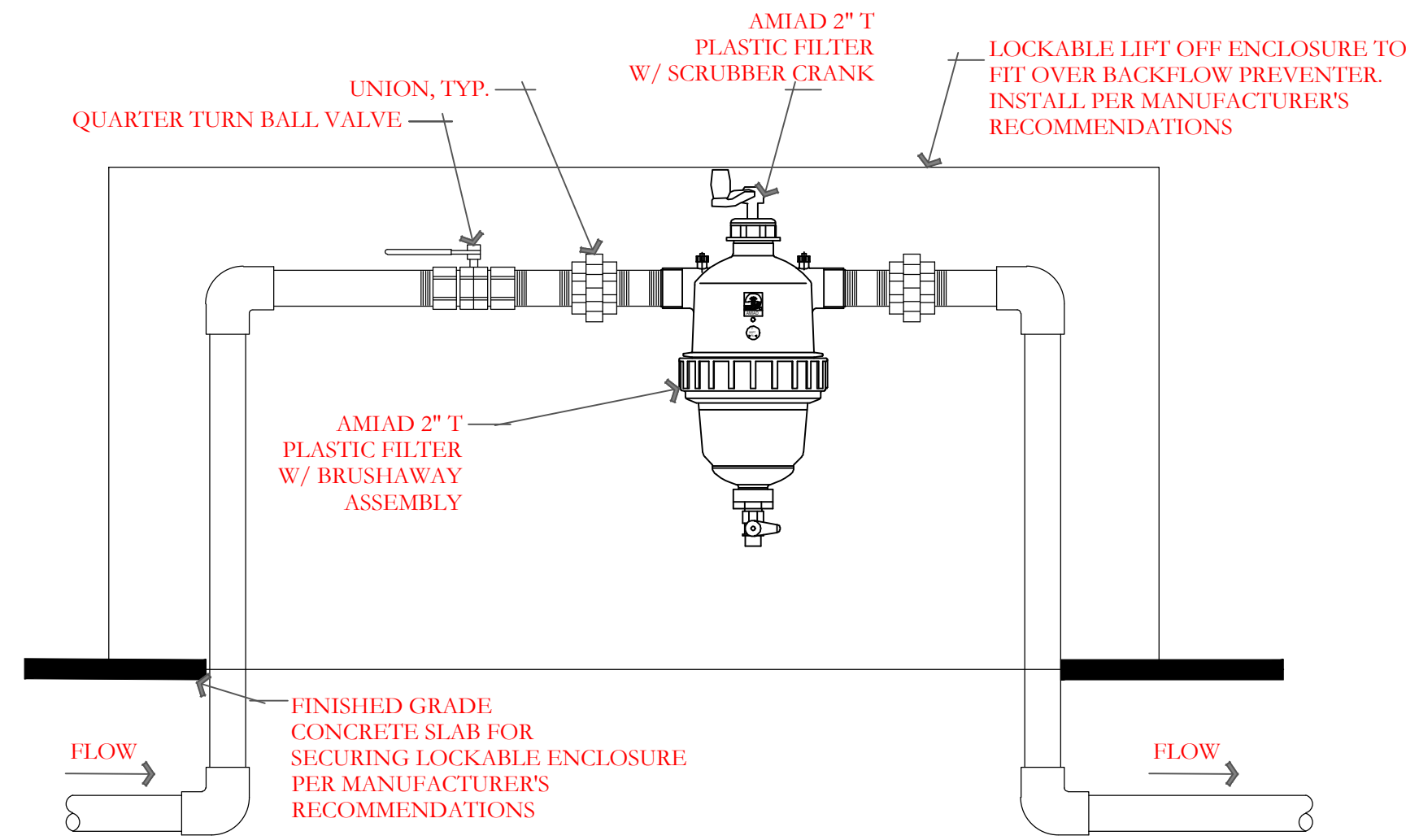
NOTES:
 1. ESP-LXIVM CONTROLLER IS AVAILABLE IN TWO MODELS. THE LXIVM WITH 60 STATIONS AND THE LXIVM-PRO WITH 240 STATIONS. REFER TO THE CHART BELOW FOR DIFFERENCES BETWEEN THE TWO MODELS.
 2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
 3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS. IF CONTROLLER IS MOUNTED INDOORS, USE POWER SUPPLY GROUND.

KEY SPECIFICATIONS

FEATURE	MODEL	MAX PROGRAMS	MAX STATIONS	MAX SIMULTANEOUS MASTER VALVES	FLOW SENSORS	WEATHER SENSORS
	LX-IVM	10	60	8	5	4
	LX-IVM PRO	40	240	16	10	8

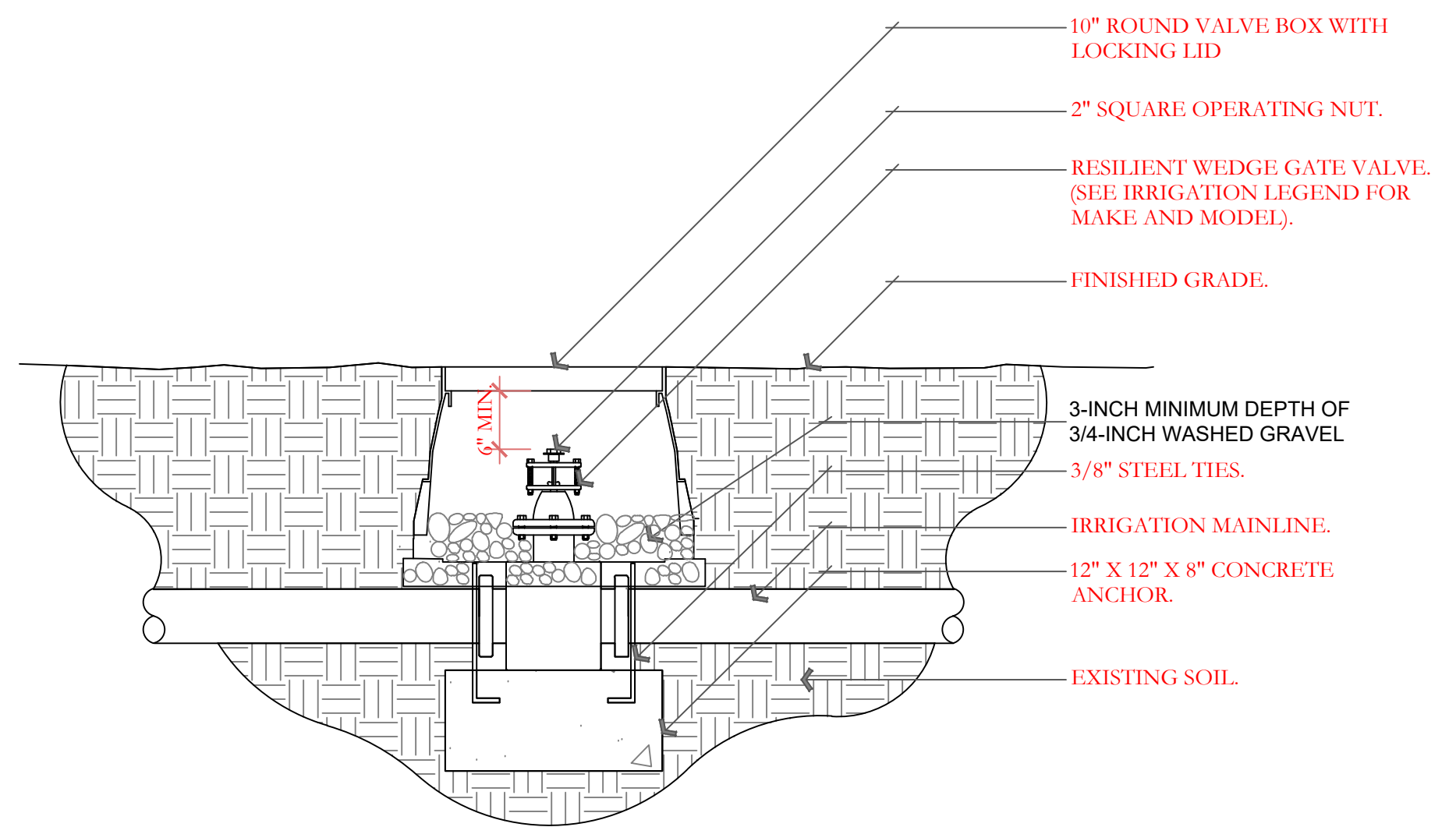
A ESP-LXIVM/PRO TWO-WIRE CONTROLLER IN METAL CABINET

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B 2" PLASTIC FILTER W/ BRUSHAWAY ASSEMBLY

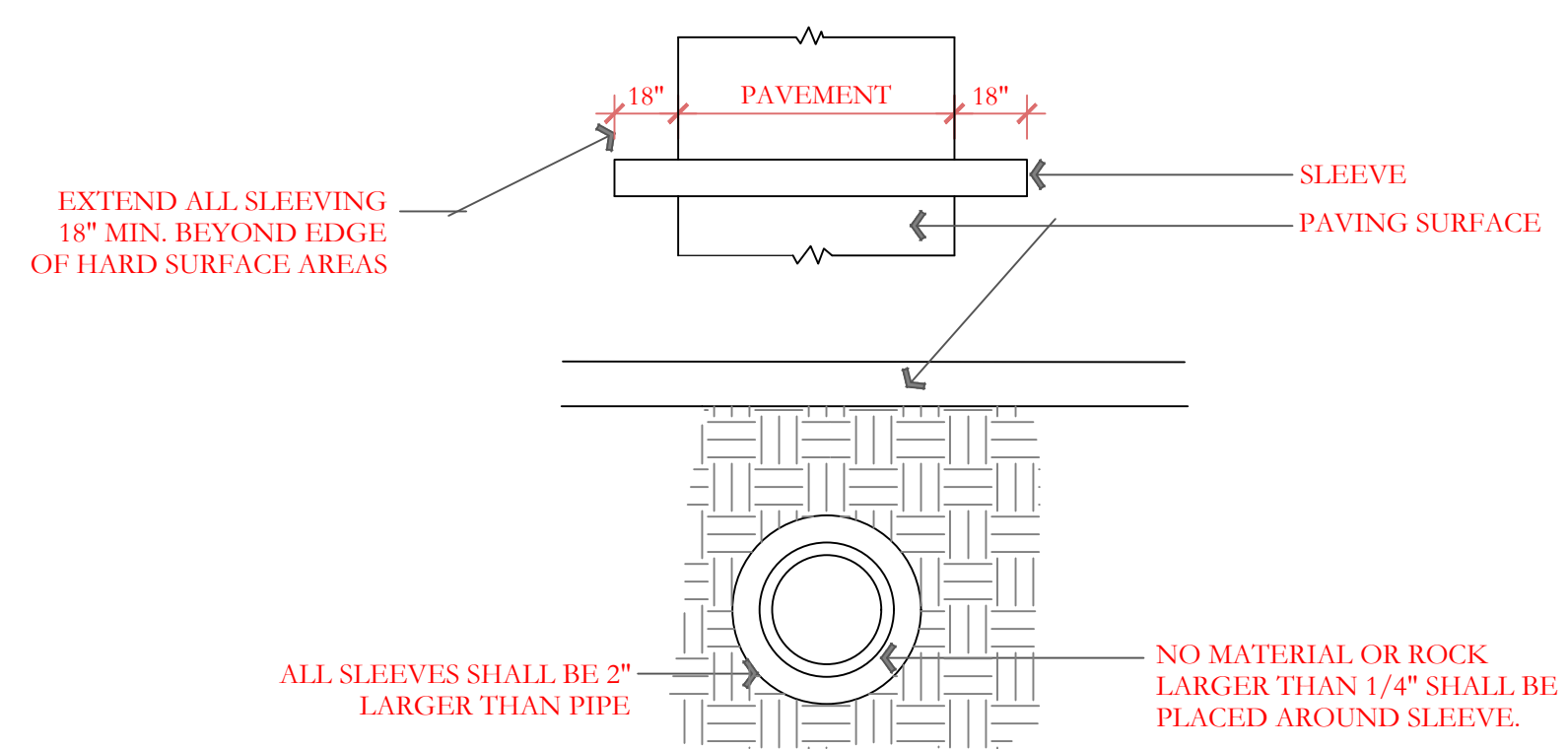
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C GATE VALVE AND ANCHOR DETAIL

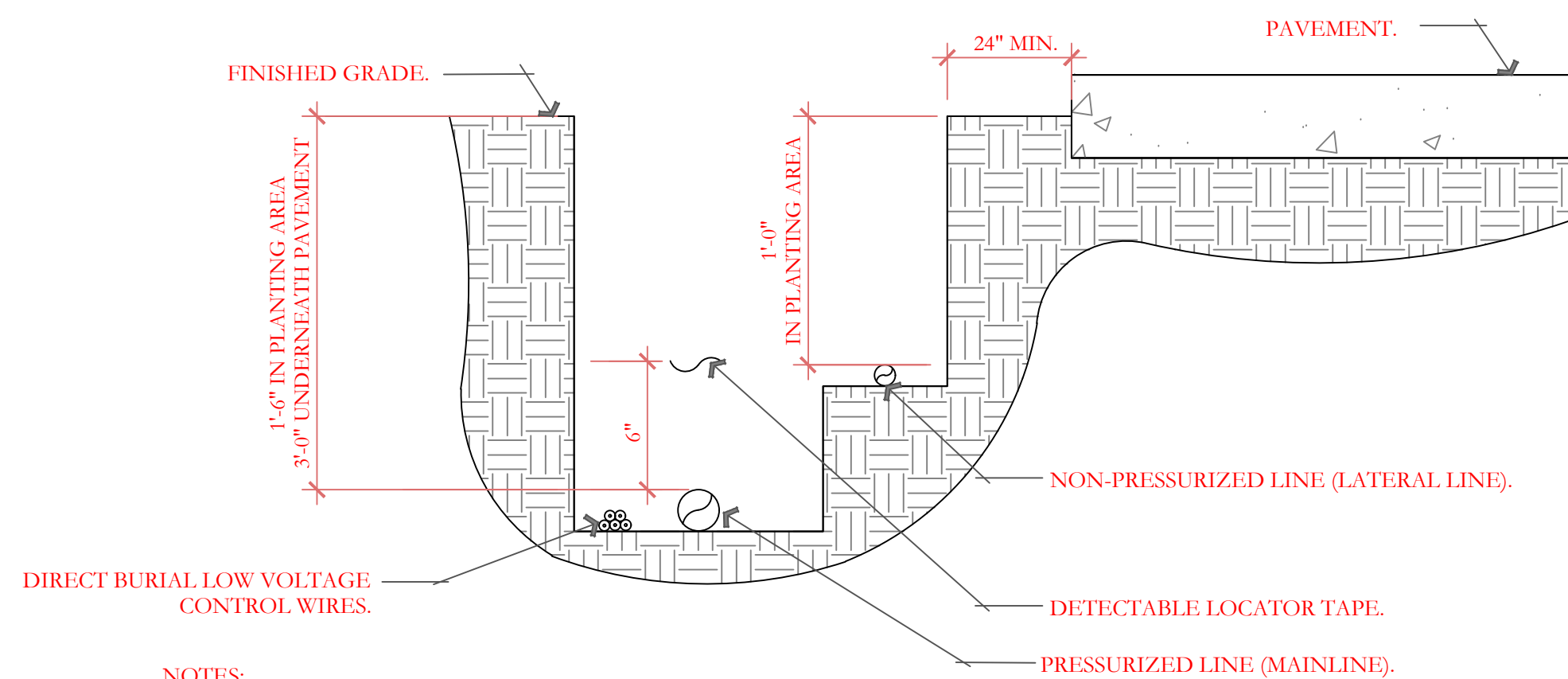
PKJ DESIGN GROUP

- NOTES:
 1. INSTALL GATE VALVE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 2. VALVE BOX SHALL BE WRAPPED WITH MINIMUM 3 MIL THICK PLASTIC AND SECURE IT TO VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
 3. VALVE BOX SHALL BE LOCATED IN PLANTING AREA.



D TYPICAL SLEEVING DETAIL

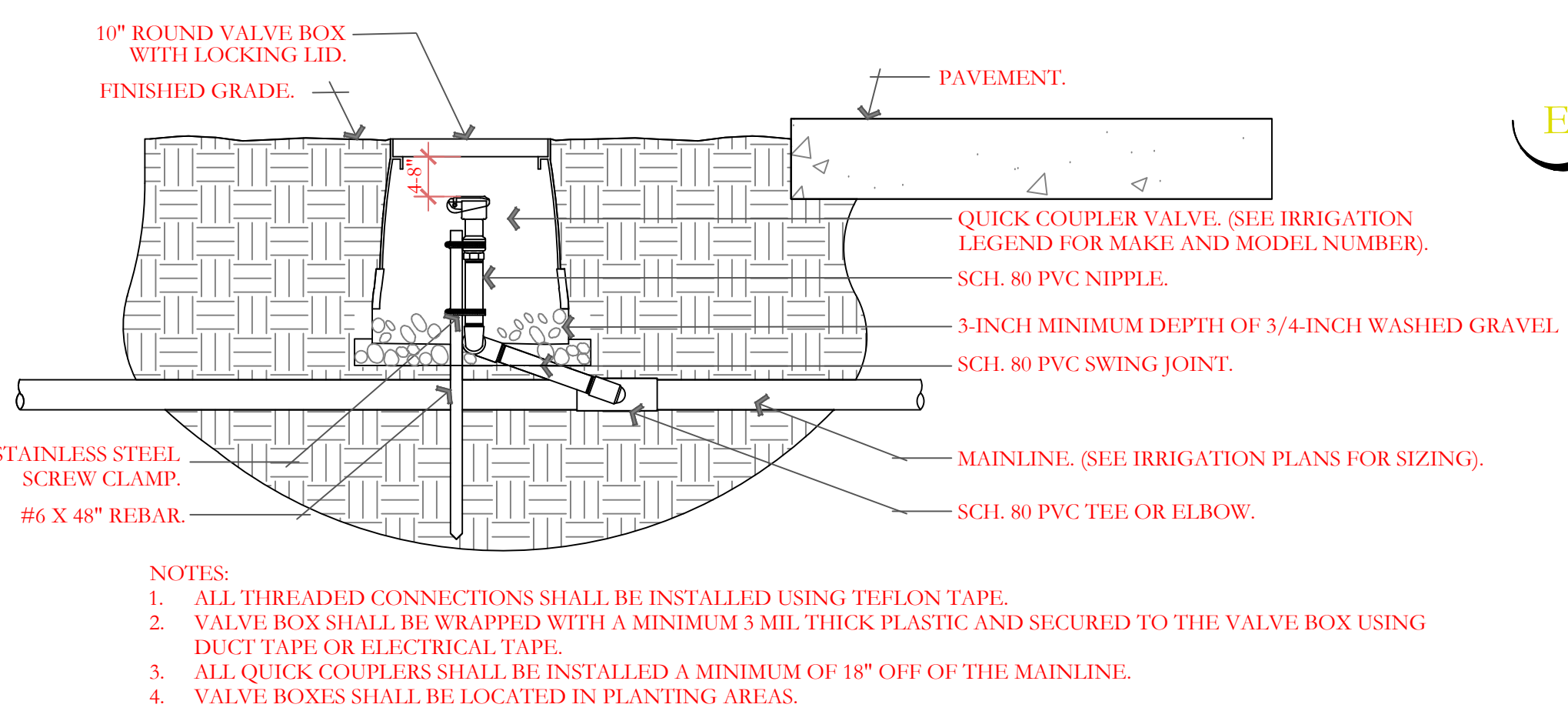
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E IRRIGATION TRENCHING DETAIL

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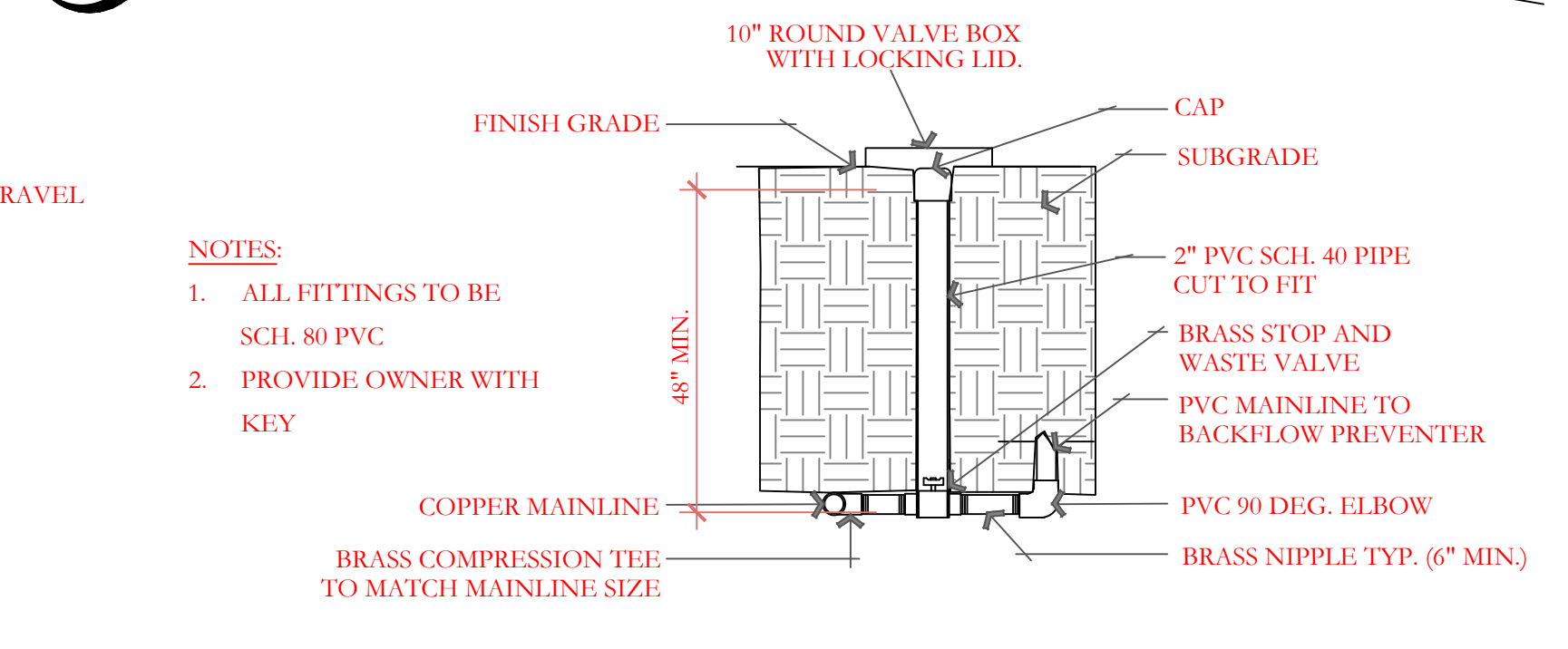
- NOTES:
 1. SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZE AND TYPE.
 2. DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT IF REQUIRED.
 3. 2-WIRE IRRIGATION WIRE SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT.
 4. DETECTABLE LOCATOR TAPE SHALL BE LOCATED SIX INCHES (6") ABOVE THE ENTIRE MAINLINE RUN.



G QUICK COUPLER DETAIL

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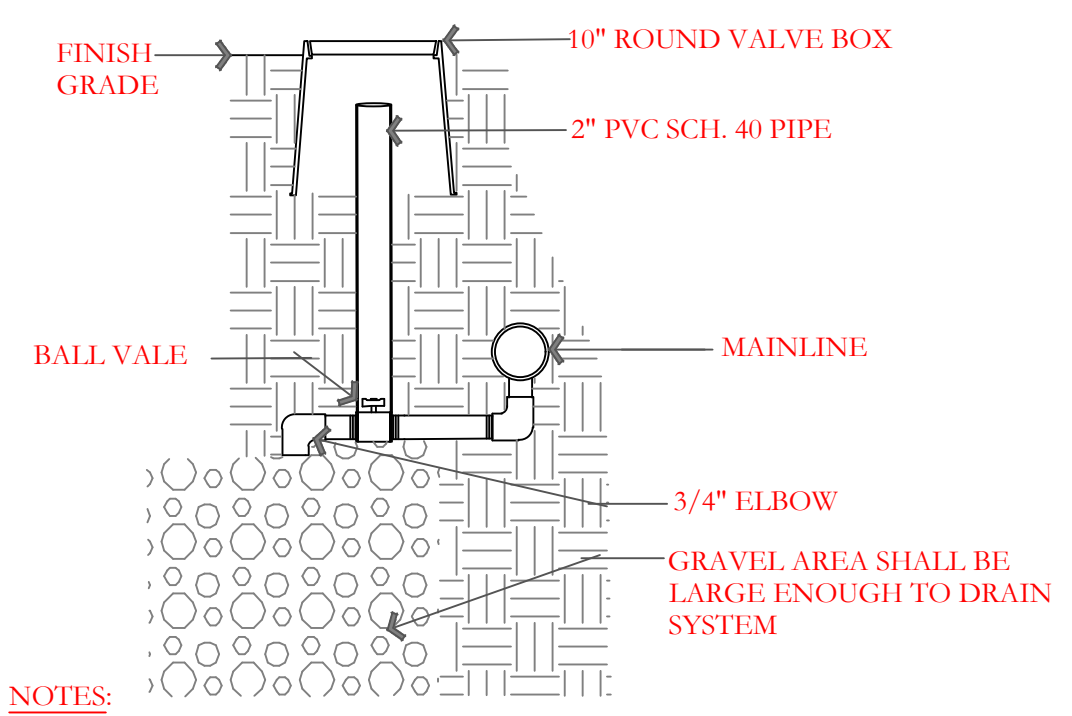
- NOTES:
 1. ALL THREADED CONNECTIONS SHALL BE INSTALLED USING TEFLON TAPE.
 2. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
 3. ALL QUICK COUPLERS SHALL BE INSTALLED A MINIMUM OF 18" OFF OF THE MAINLINE.
 4. VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS.



H STOP AND WASTE VALVE ASSEMBLY DETAIL

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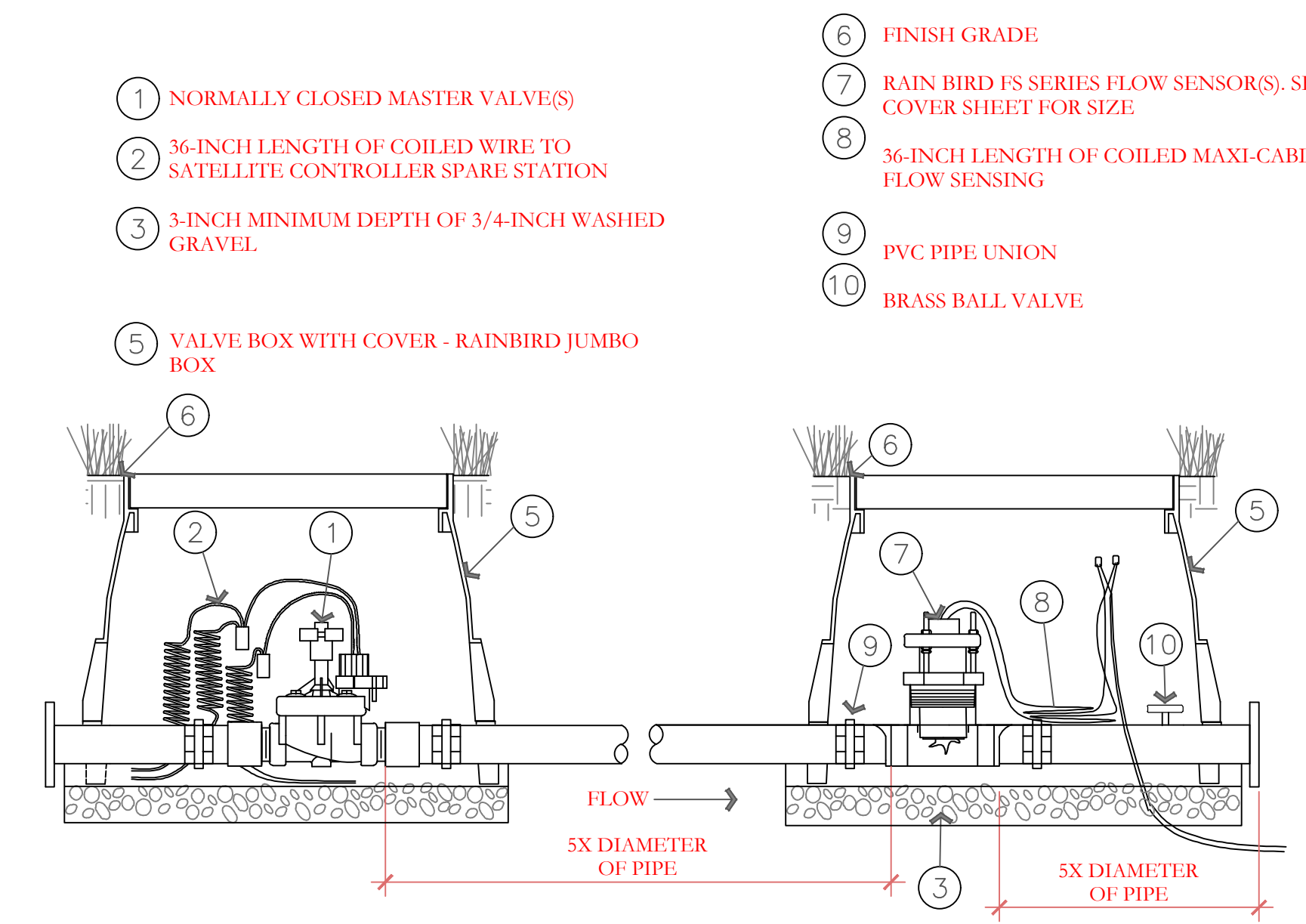
- NOTES:
 1. ALL FITTINGS TO BE SCH. 80 PVC
 2. PROVIDE OWNER WITH KEY



F MANUAL DRAIN DETAIL

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- NOTES:
 1. ALL FITTINGS TO BE SCH. 80 PVC
 2. PROVIDE OWNER WITH KEY



I MASTER VALVE AND FLOW SENSOR DETAIL

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ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
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3/26/2024 UT24038

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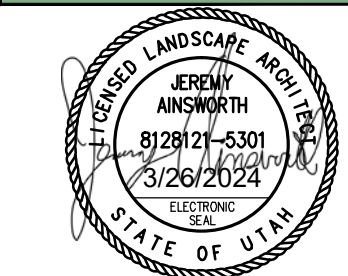
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CC CALLAWAY
 77 N. SUMMIT RIDGE PARKWAY
 SANTAQUIN, UTAH

EXCEL ENGINEERING
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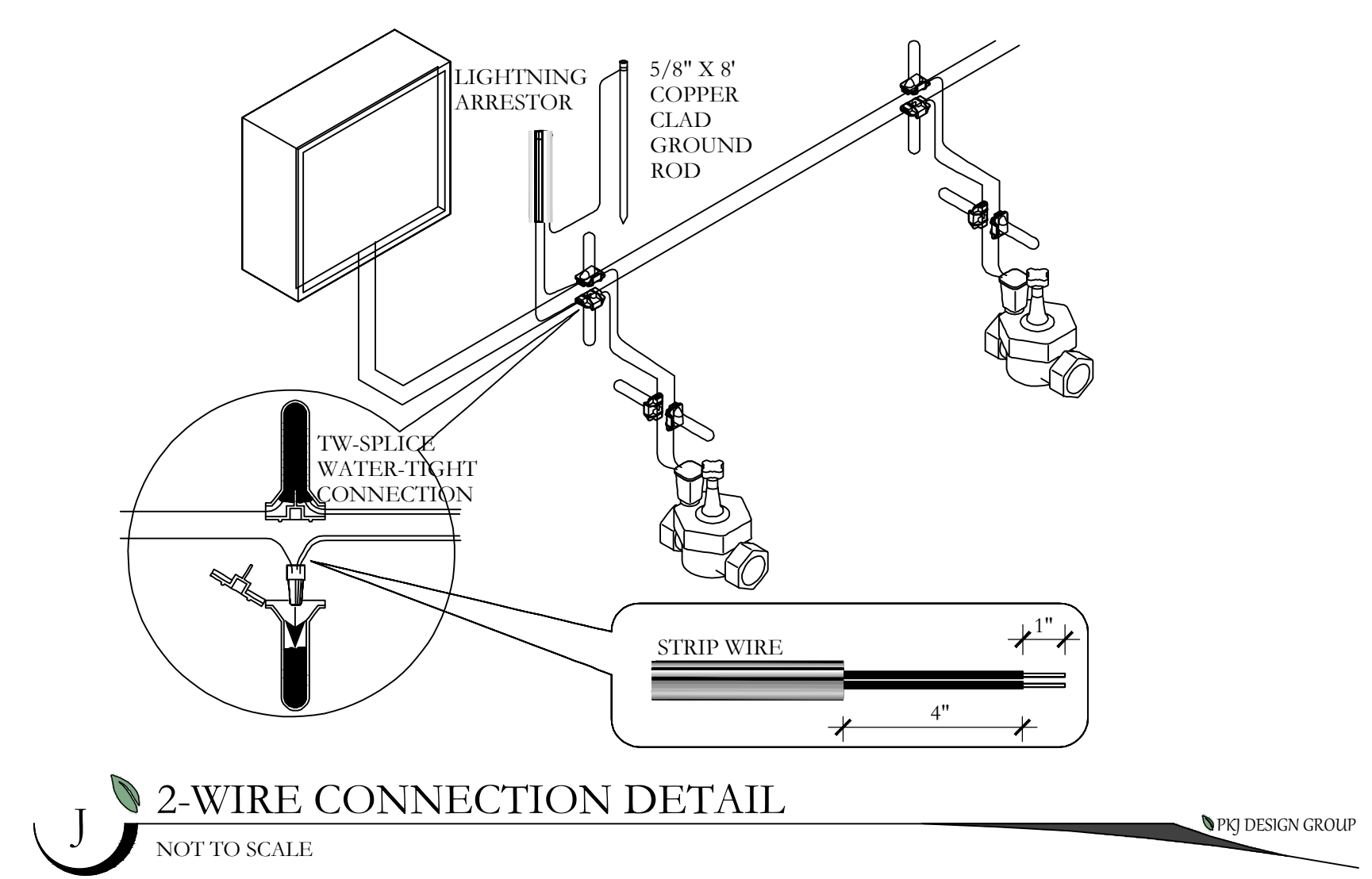


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 P.M.: JTA
 DRAWN: ACP
 CHECKED: JMA
 PLOT DATE: 3/26/2024

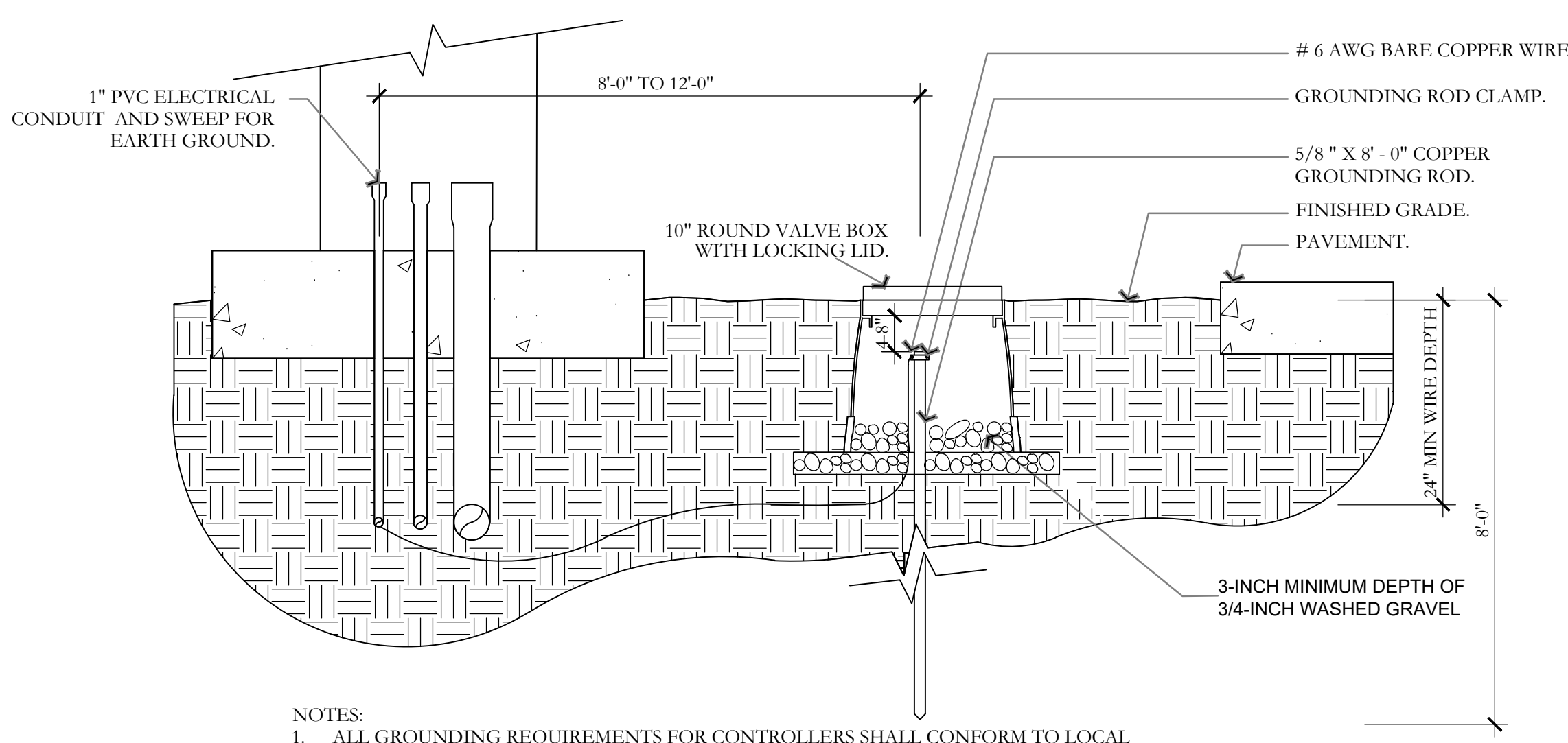
IRRIGATION DETAILS

CITY PERMIT SET

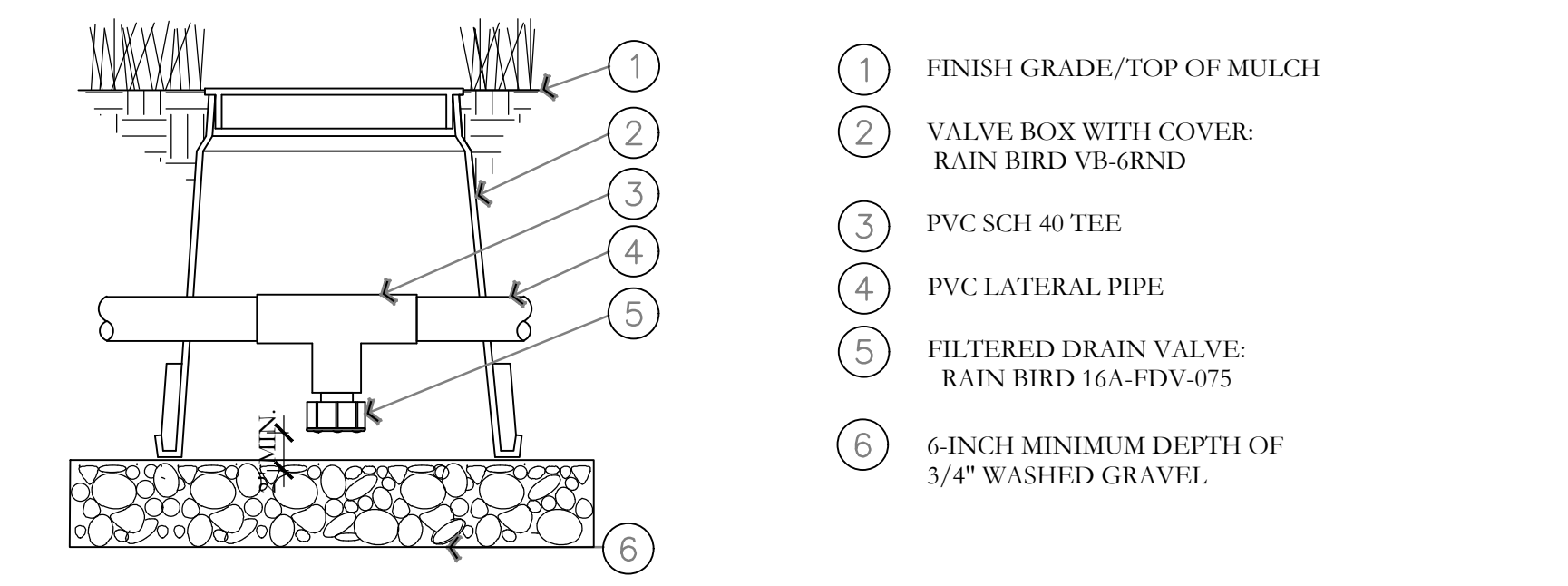
IR-501



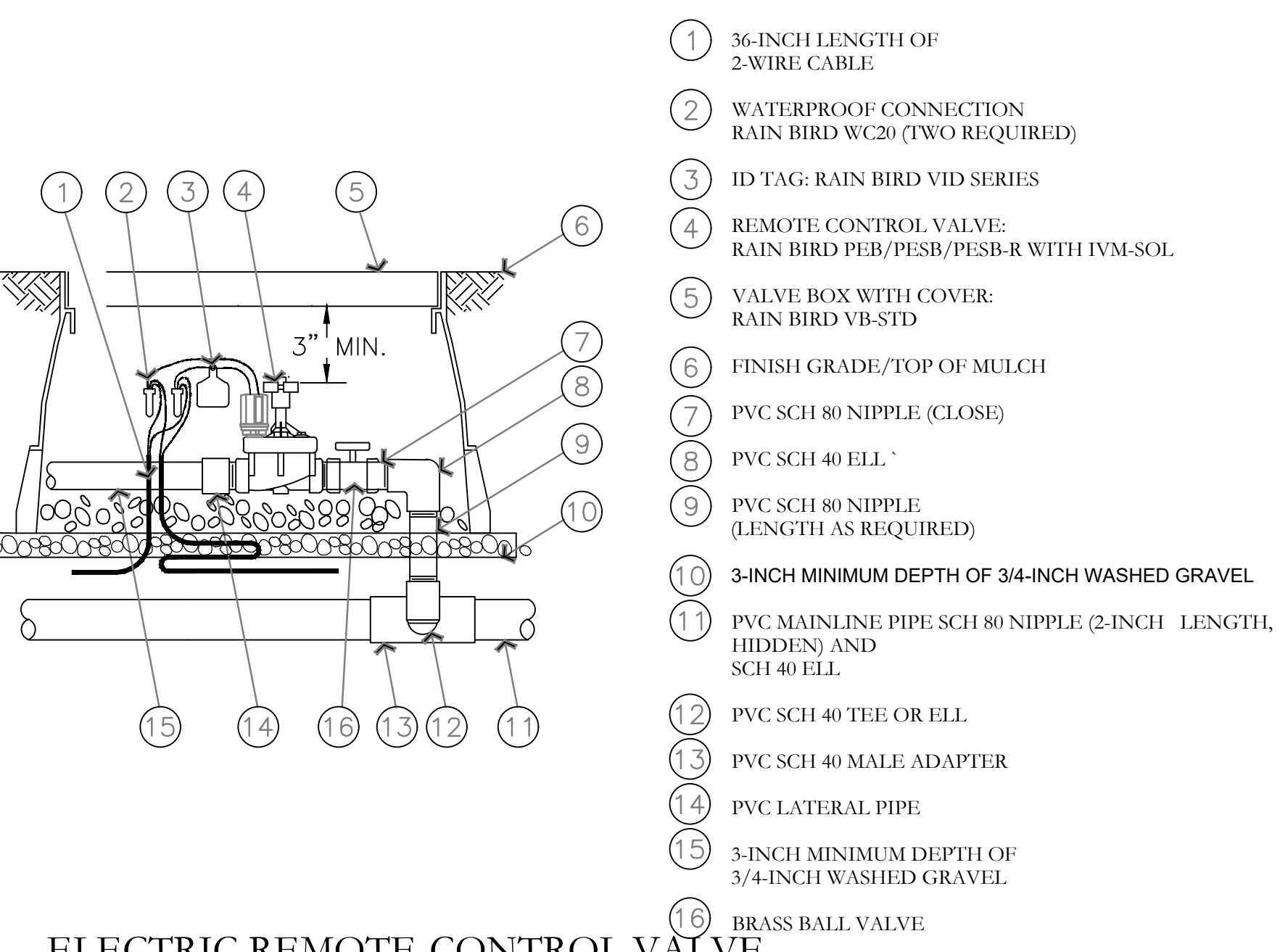
J 2-WIRE CONNECTION DETAIL
NOT TO SCALE



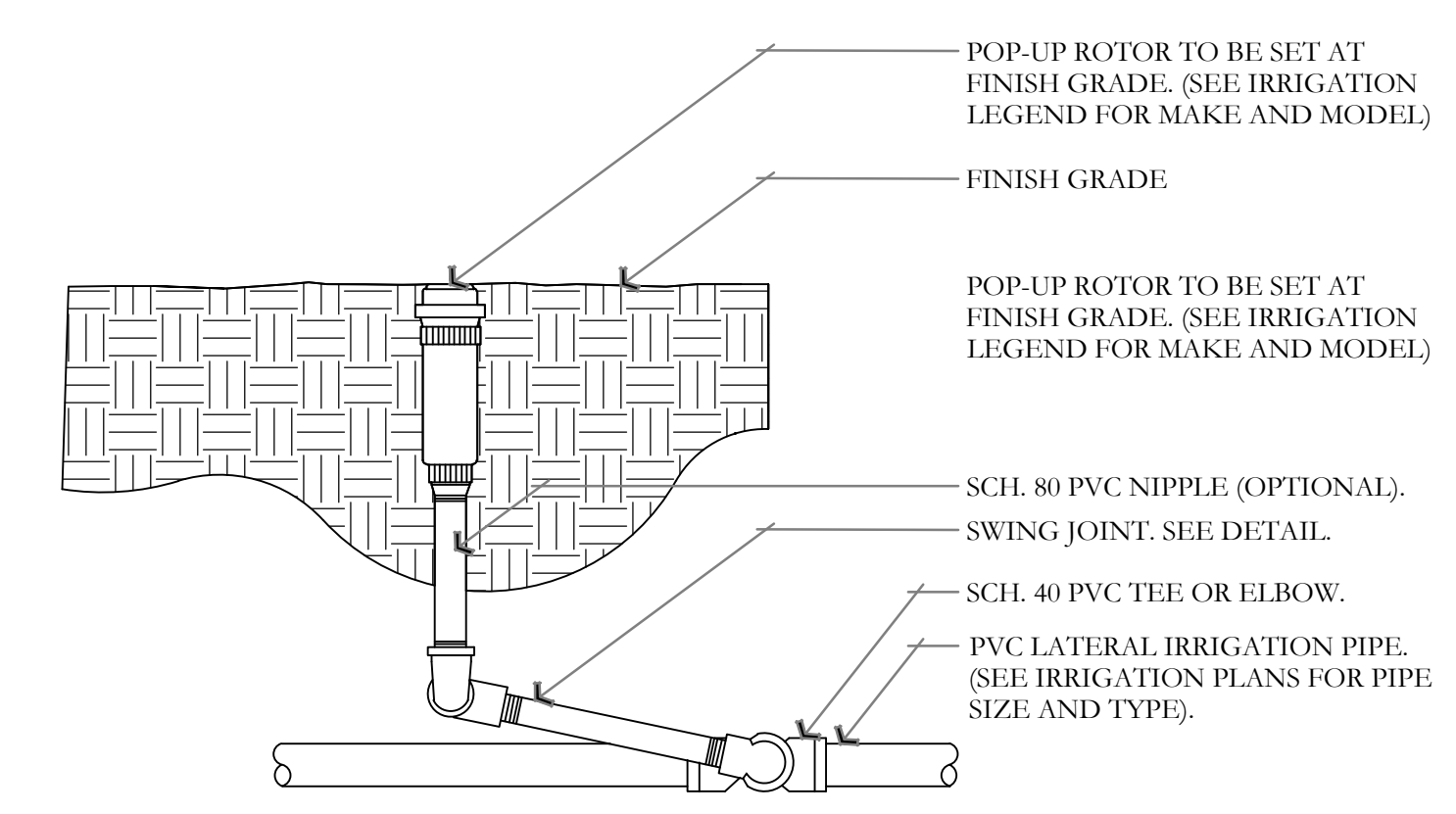
K GROUNDING ROD DETAIL
NOT TO SCALE



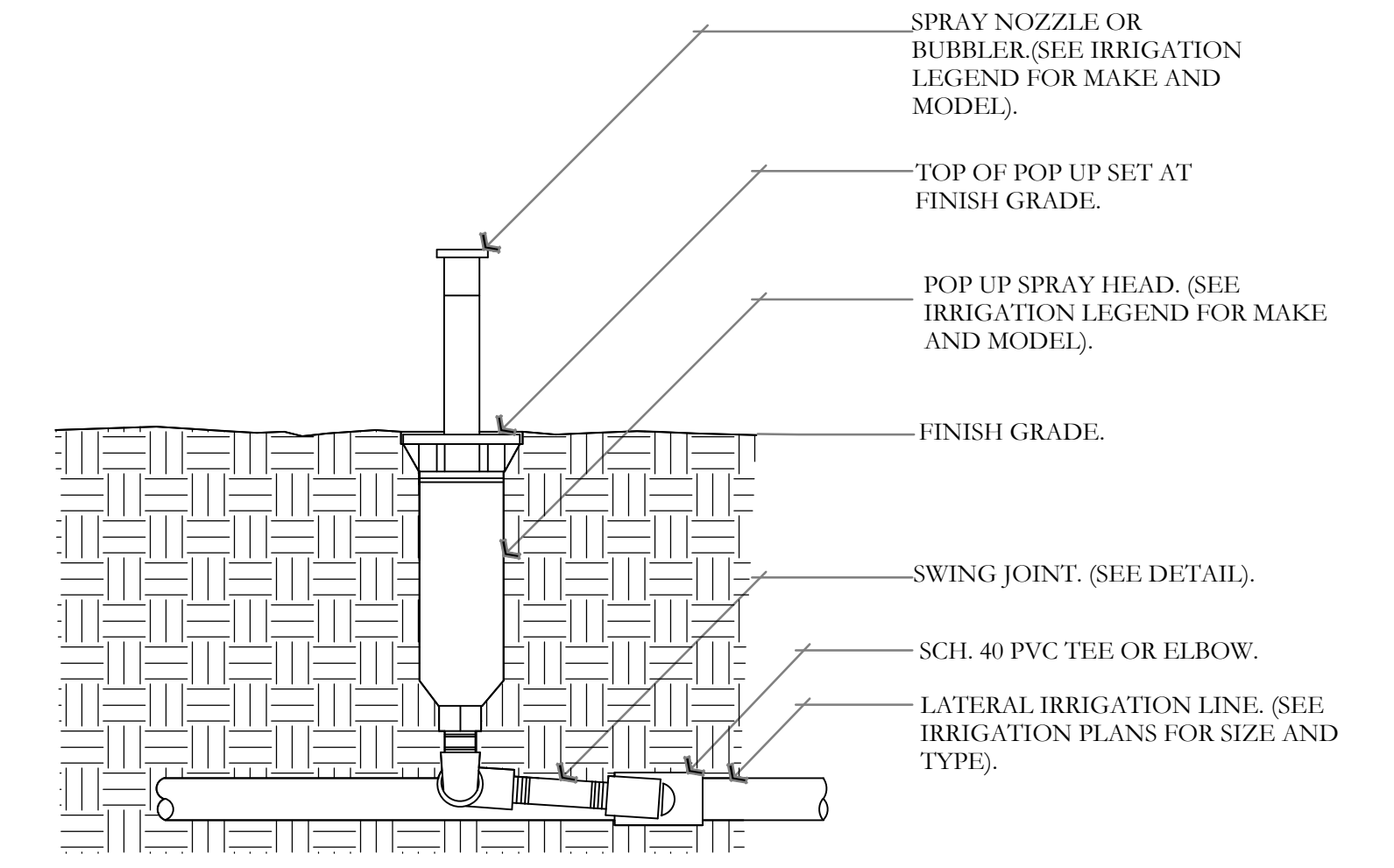
L MANUAL LINE DRAIN VALVE DETAIL
NOT TO SCALE



M ELECTRIC REMOTE-CONTROL VALVE PEB OR PESB SERIES WITH IVM-SOL
NOT TO SCALE

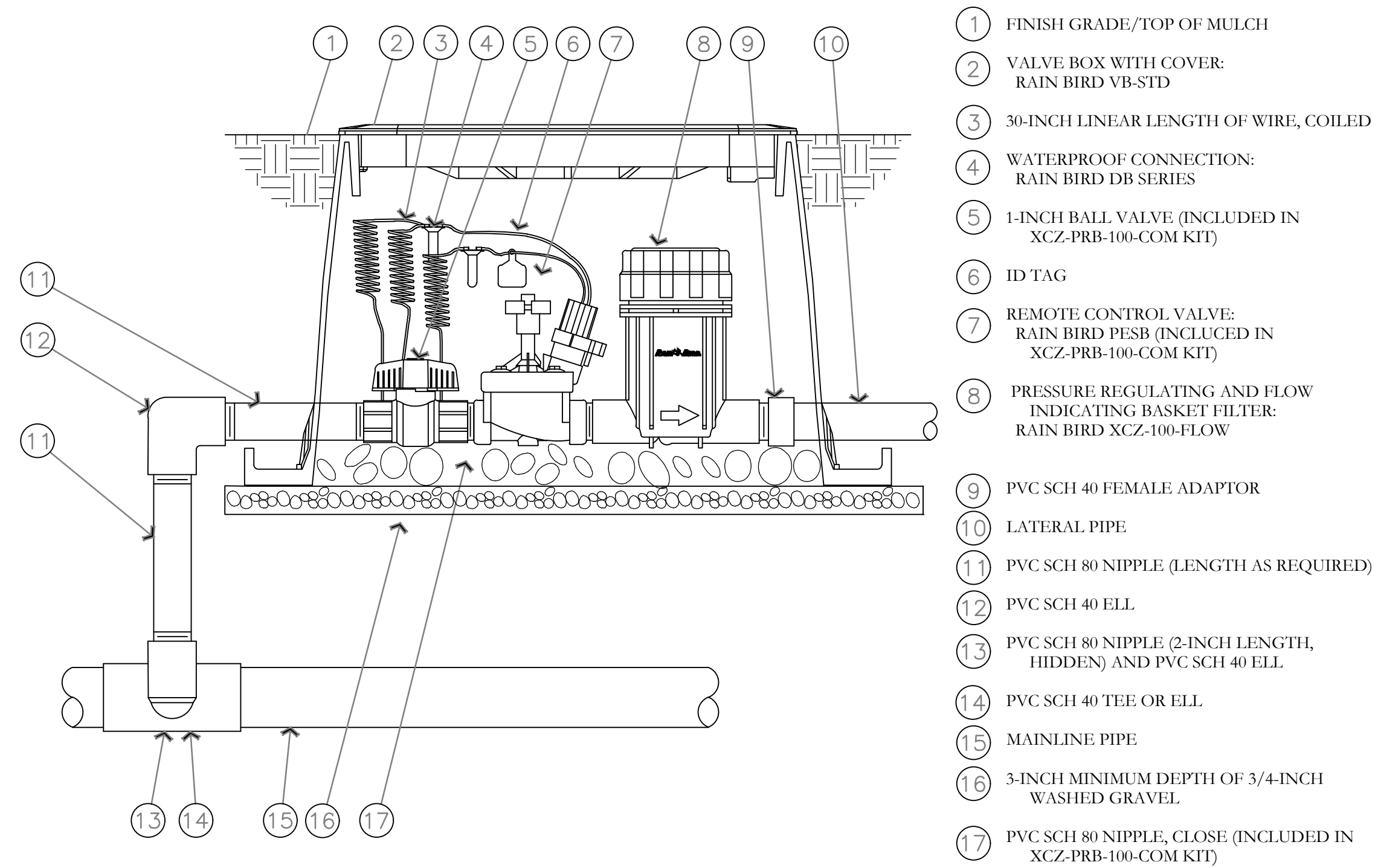


N ROTOR HEAD DETAIL
NOT TO SCALE



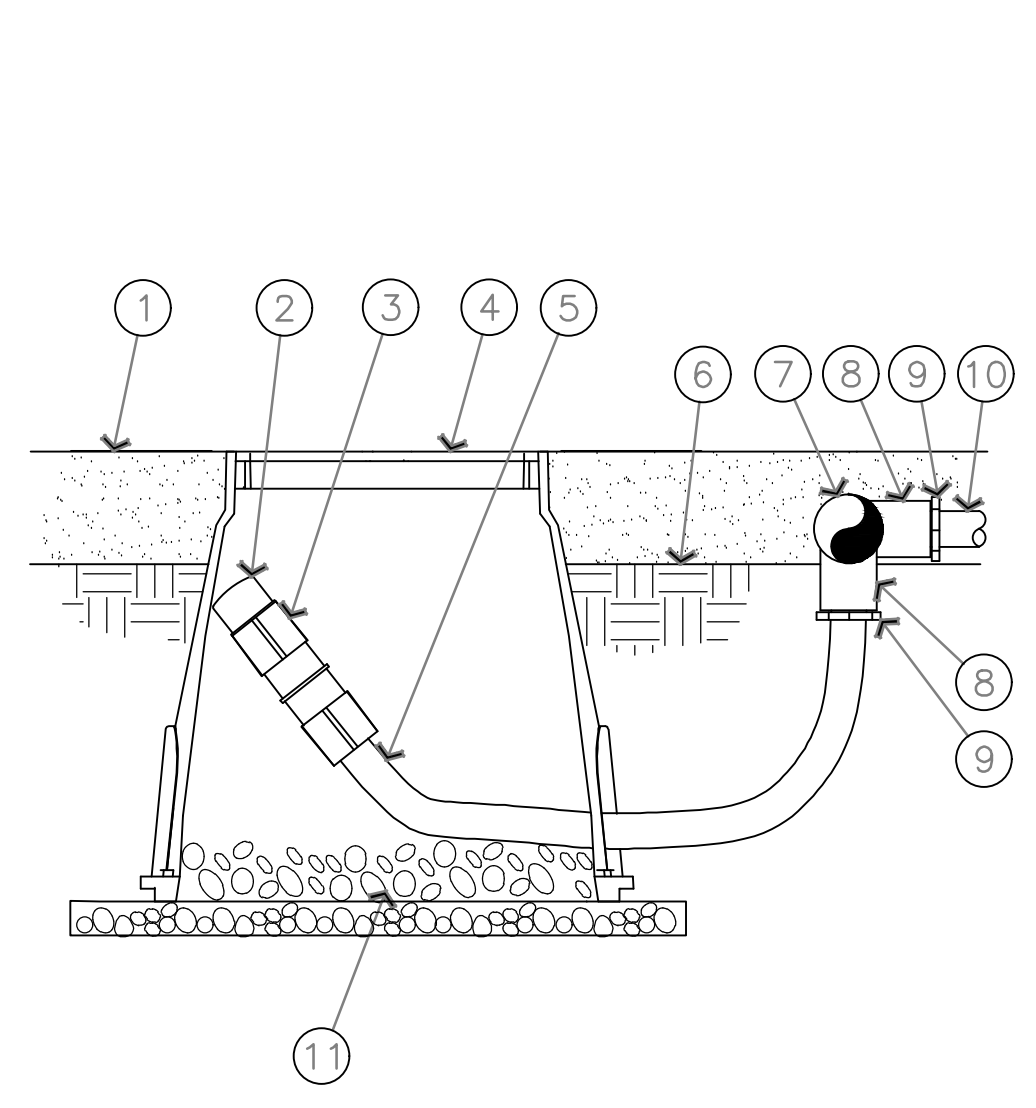
O POP UP-SPRAY HEAD DETAIL
NOT TO SCALE

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
3/26/2024	UT24038			EXCEL ENGINEERING ATE: DAVID PETERSON 801-756-4504 DAVID@EXCELCIVIL.COM	PKJ DESIGN GROUP		PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 3/26/2024
NO. REVISION DATE 1 XXXX XX-XX-XX 2 3 4 5 6 7			CC CALLAWAY 77 N. SUMMIT RIDGE PARKWAY SANTAQUIN, UTAH		PKJ DESIGN GROUP Landscape Architecture & Planning & Visualization 3450 N. TRIUMPH BLVD. SUITE 102 LEHI, UTAH 84043 (801) 753-5644 www.pkjdesigngroup.com		IRRIGATION DETAILS CITY PERMIT SET IR-502



- ① FINISH GRADE/TOP OF MULCH
- ② VALVE BOX WITH COVER: RAIN BIRD VB-STD
- ③ 30-INCH LINEAR LENGTH OF WIRE, COILED
- ④ WATERPROOF CONNECTION: RAIN BIRD DB SERIES
- ⑤ 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
- ⑥ ID TAG
- ⑦ REMOTE CONTROL VALVE: RAIN BIRD PERS (INCLUDED IN XCZ-PRB-100-COM KIT)
- ⑧ PRESSURE REGULATING AND FLOW INDICATING BASKET FILTER: RAIN BIRD XCZ-100-FLOW
- ⑨ PVC SCH 40 FEMALE ADAPTOR
- ⑩ LATERAL PIPE
- ⑪ PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- ⑫ PVC SCH 40 ELL
- ⑬ PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
- ⑭ PVC SCH 40 TEE OR ELL
- ⑮ MAINLINE PIPE
- ⑯ 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- ⑰ PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

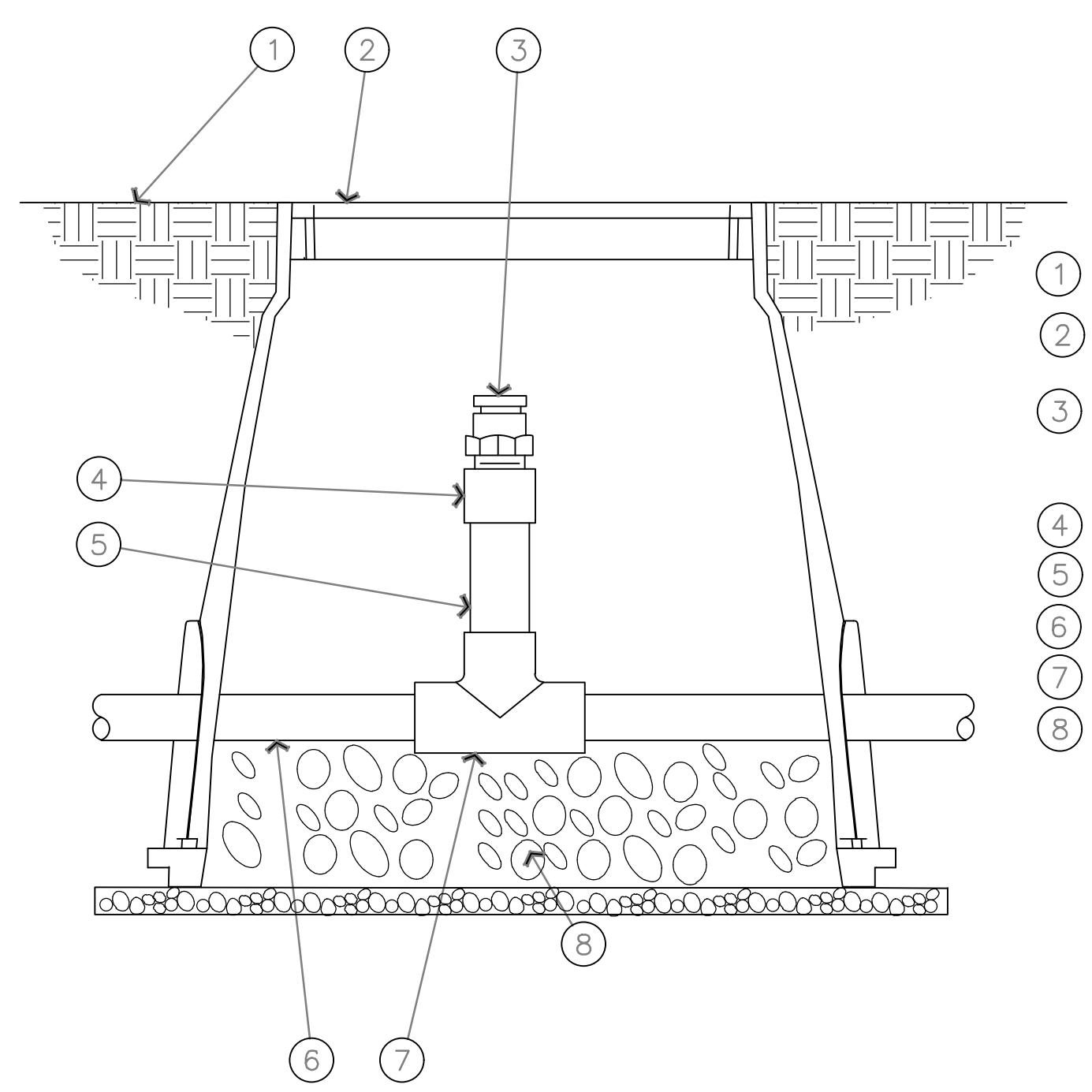
P DRIP CONTROL ZONE KIT DETAIL
NOT TO SCALE



- ① MULCH
- ② FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE-RAIN BIRD MDCFCAP
- ③ EASY FIT COUPLING: RAIN BIRD MDCFCOUP
- ④ SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
- ⑤ 1/2" POLYETHYLENE TUBING: RAIN BIRD XF-BLANK TUBING
- ⑥ FINISH GRADE
- ⑦ PVC EXHAUST HEADER
- ⑧ PVC SCH 40 TEE OR EL
- ⑨ BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- ⑩ ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV DRIPLINE
- ⑪ 3-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL

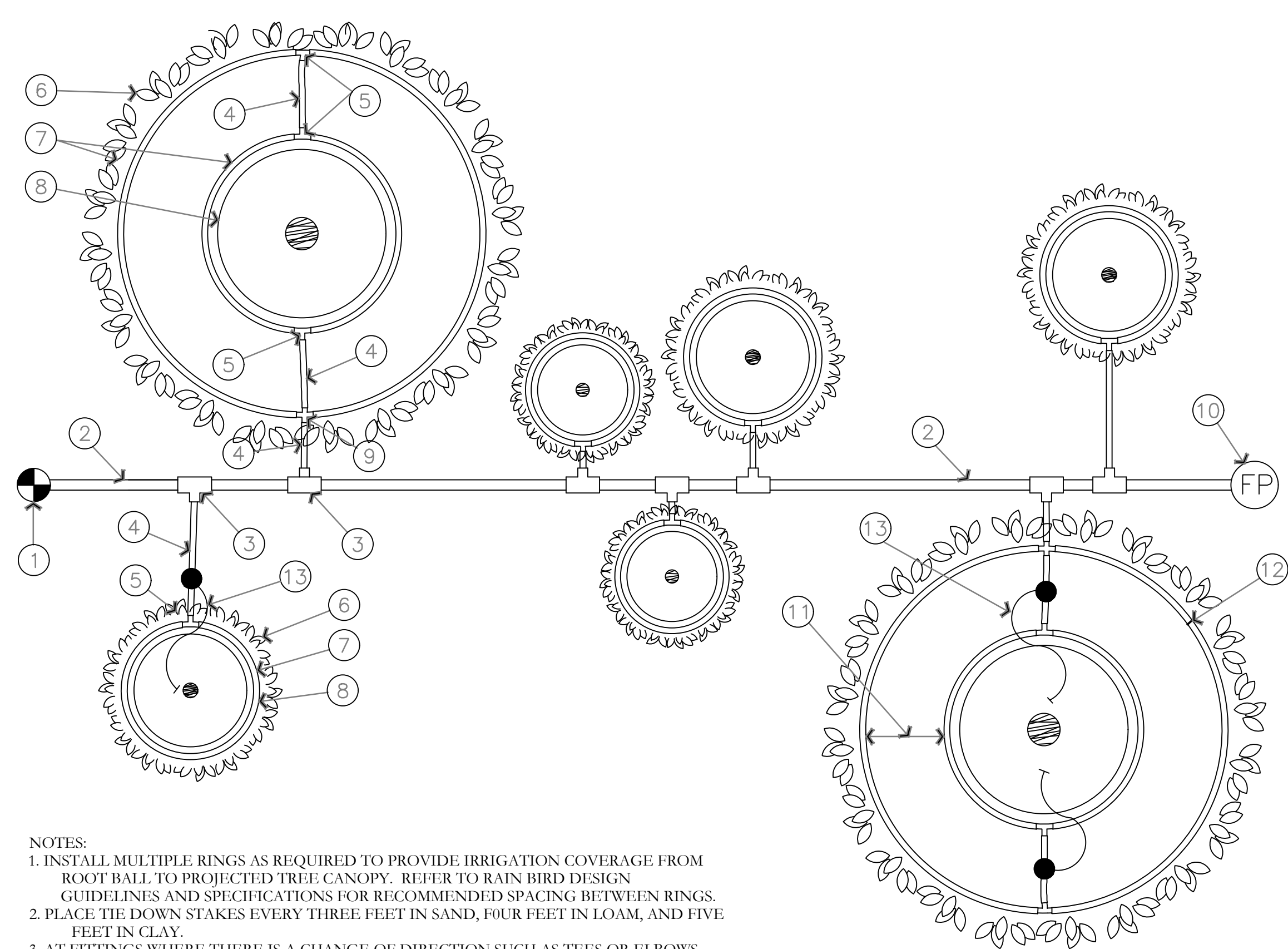
NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

Q ON-SURFACE DRIPLINE FLUSH POINT DETAIL
NOT TO SCALE



- ① FINISH GRADE
- ② SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
- ③ 1/2" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
- ④ PVC SCH 40 FEMALE ADAPTER
- ⑤ PVC SCH 80 RISER
- ⑥ PVC HEADER PIPE
- ⑦ PVC SCH 40 TEE
- ⑧ 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL

R AIR RELIEF VALVE DETAIL
NOT TO SCALE



- ① RAIN BIRD CONTROL ZONE KIT (SIZED TO ACCOMMODATE LATERAL FLOW DEMAND)
- ② PVC DRIP LATERAL PIPE
- ③ PVC SCH 40 TEE OR EL (TYPICAL)
- ④ 1/2" POLYETHYLENE TUBING: RAIN BIRD XF SERIES-S FOR COPPER SHEILD (TYPICAL)
- ⑤ BARB X BARB INSERT TEE: RAIN BIRD XFF-TTEE (TYPICAL)
- ⑥ PROJECTED CANOPY LINE OF TREE OR SHRUB (TYPICAL)
- ⑦ ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV SERIES PLACE AS SHOWN (LENGTH AS REQUIRED, TYPICAL)
- ⑧ ROOT BALL (TYPICAL)
- ⑨ BARB X BARB INSERT CROSS: RAIN BIRD XFD-CROSS (TYPICAL)
- ⑩ DRIPLINE FLUSH POINT (SEE RAIN BIRD DETAIL: "XFCV DRIPLINE FLUSH POINT WITH BALL VALVE")
- ⑪ SPACING PER SPECIFICATION
- ⑫ TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED, SEE NOTES 2-3 BELOW)
- ⑬ POINT SOURCE EMITTERS FOR ESTABLISHMENT PERIOD. REMOVE AFTER ESTABLISHMENT PERIOD.

NOTES:
1. INSTALL MULTIPLE RINGS AS REQUIRED TO PROVIDE IRRIGATION COVERAGE FROM ROOT BALL TO PROJECTED TREE CANOPY. REFER TO RAIN BIRD DESIGN GUIDELINES AND SPECIFICATIONS FOR RECOMMENDED SPACING BETWEEN RINGS.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

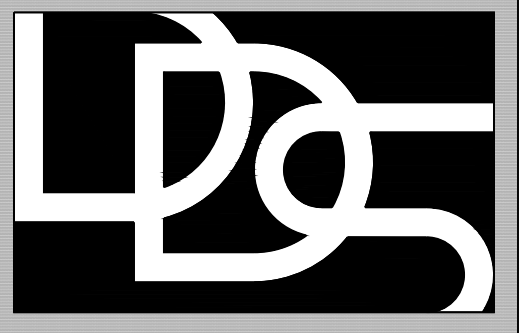
S ON-SURFACE DRIPLINE TREE/SHRUB DETAIL
NOT TO SCALE

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
3/26/2024	UT24038			EXCEL ENGINEERING ATE: DAVID PETERSON 801-756-4504 DAVID@EXCELCIVIL.COM	PKJ DESIGN GROUP		PM: JTA DRAWN: ACP CHECKED: JMA PLOT DATE: 3/26/2024
		<h2 style="margin: 0;">CC CALLAWAY</h2> <h3 style="margin: 0;">77 N. SUMMIT RIDGE PARKWAY</h3> <h3 style="margin: 0;">SANTAQUIN, UTAH</h3>		<p style="font-size: small;">COPYRIGHT: PKJ DESIGN GROUP</p> <p style="font-size: x-small;">THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS PROPERTY OF PKJ DESIGN GROUP. IT IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF PKJ DESIGN GROUP.</p>		<p style="font-weight: bold; font-size: small;">DESIGN GROUP</p> <p style="font-size: x-small;">Landscape Architecture • Planning • Visualization</p> <p>3450 N. TRIUMPH BLVD. SUITE 102 LEHI, UTAH 84043 (801) 753-5644 www.pkjdesigngroup.com</p>	
				<p style="font-weight: bold; font-size: small;">IRRIGATION DETAILS</p> <p style="color: red; font-weight: bold; font-size: x-small;">CITY PERMIT SET</p>		<p style="font-size: 2em; font-weight: bold;">IR-503</p>	

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
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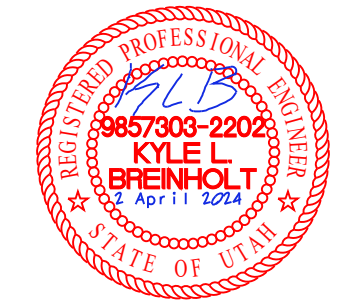
811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.
1-800-662-4111
www.bluestakes.org

- NOTES:**
1. PROVIDE BID LINE ITEM FOR PER-FOOT COST FOR PRIMARY POWER CONDUIT AND TRENCHING TO LOCATION TO BE NEGOTIATED BETWEEN OWNER AND ROCKY MOUNTAIN POWER.
 2. PROVIDE BID LINE ITEM FOR PER-FOOT COST FOR COMMUNICATIONS CONDUIT AND TRENCHING TO YET TO BE DETERMINED FINAL COMMUNICATIONS TIE-IN POINT.
 3. PROGRAM EXTERIOR FIXTURES S1 TO OPERATE DUSK TO DAWN AND PROVIDE OCCUPANCY SENSOR TO DIM TO 50% WHEN AREA IS UNOCCUPIED PER IECC C405.2.7.3.



Diversified
DESIGN SERVICES AND ENGINEERING, L.C.

6236 SOUTH TURPIN ST.
MURRAY, UTAH 84107
TELEPHONE (801) 347-2369
Email: brandon@dds-slc.com



BREINHOLT

POWER ENGINEERING, PLLC
805 SOUTH 5430 WEST LEHI UT 84043
(801) 367-5180 PROJECT BPE2484

PROJECT NAME:
A NEW BUILDING FOR:
CC CALLAWAY LLC
SANTAQUIN PEAKS INDUSTRIAL PARK
LOTS #4, 5 & 6
77 N. SUMMIT RIDGE PARKWAY
SANTAQUIN, UTAH 84655

PROJECT INFO.

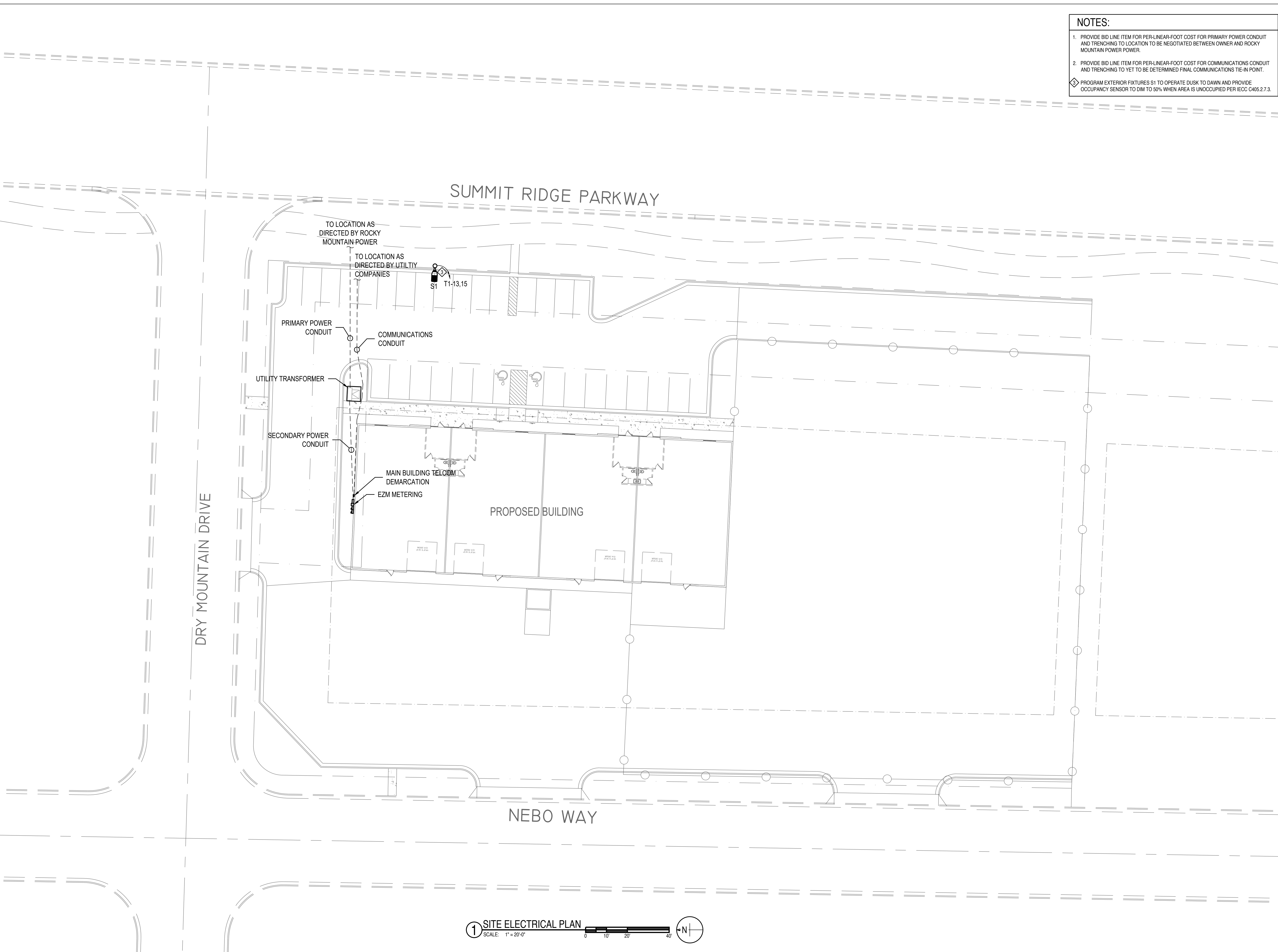
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CAD FILE NAME:	ES101 CC CALLAWAY
DRAWN BY:	KLB
CHECKED BY:	KLB
SCALE:	AS SHOWN
DATE:	4-2-2024

REVISIONS

REV.	DATE	DESCRIPTION

SHEET TITLE:
SITE ELECTRICAL PLAN

ES101
SHEET **4** OF **9**

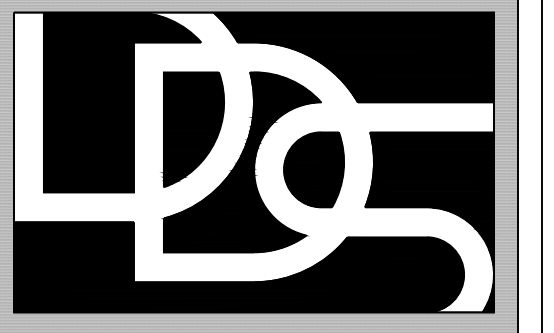


1 SITE ELECTRICAL PLAN
SCALE: 1" = 20'-0"

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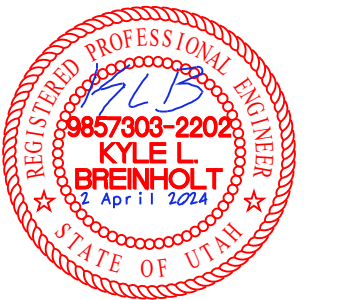
NOTES:

- ILLUMINATION LEVELS INDICATED IN FOOT-CANDELS.
- PHOTOMETRIC ANALYSIS:
 AVERAGE 0.8 FC
 MAXIMUM 43.7 FC
 MINIMUM 0.0 FC
 MAXMIN N/A
 AVERAGEMIN N/A
- FIXTURE CUT SHEETS



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 DESIGN SERVICES AND ENGINEERING, L.C.

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BREINHOLT
 POWER ENGINEERING, PLLC
 805 SOUTH 5430 WEST, LEHI UT 84043
 (801) 367-5180 PROJECT BPE2484

PROJECT NAME:
CC CALLAWAY LLC
SANTAQUIN PEAKS INDUSTRIAL PARK
LOTS #4, 5 & 6
77 N. SUMMIT RIDGE PARKWAY
SANTAQUIN, UTAH 84655

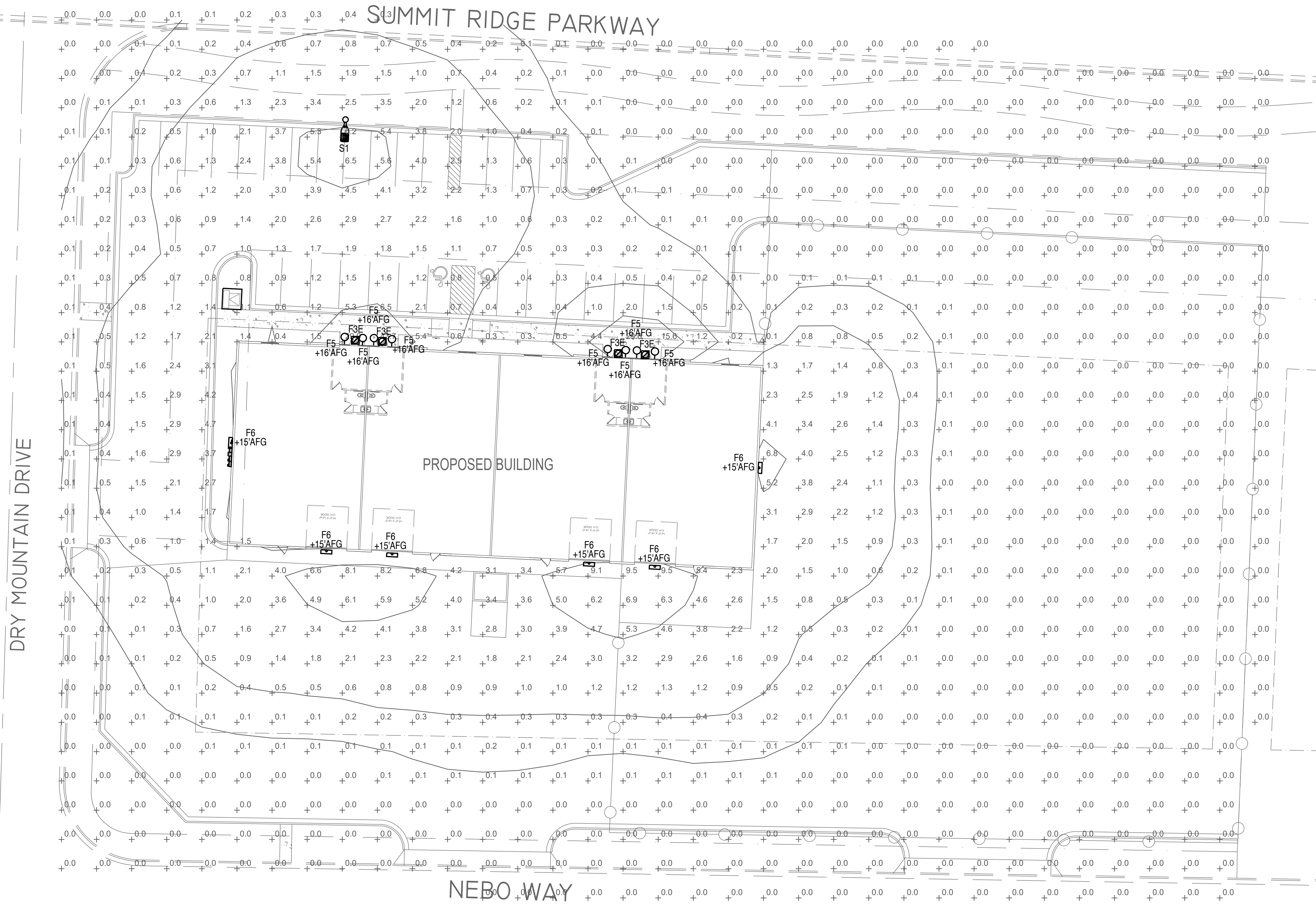
A NEW BUILDING FOR:

PROJECT INFO.	
PROJECT NO.:	2024-012
CAD FILE NAME:	ES102 CC CALLAWAY
DRAWN BY:	KLB
CHECKED BY:	KLB
SCALE:	AS SHOWN
DATE:	4-2-2024

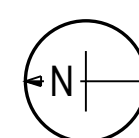
REVISIONS		
REV.	DATE	DESCRIPTION

SHEET TITLE:
SITE PHOTOMETRIC PLAN

ES102
 SHEET **5** OF **9**



1 SITE PHOTOMETRIC PLAN
 SCALE: 1" = 20'-0"



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