

# OAKVIEW - LOT 3

## FINAL DEVELOPMENT PLANS

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI  
NE 1/4 OF SEC. 31-48-31

OAKVIEW - LOT 3  
FINAL DEVELOPMENT PLANS

### SHEET LIST

SHEET NUMBER	SHEET TITLE
1	COVER
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS
4	SITE PLAN
5	GRADING & EROSION CONTROL PLAN
6	GRADING PLAN - CUT & FILL
7	UTILITY PLAN
8	SPOT ELEVATION PLAN
9	SPOT ELEVATION PLAN
10	DRAINAGE AREA MAP & CALCS
11	STORM PLAN & PROFILES
12	DETAILS
13	DETAILS
14	DETAILS
15	DETAILS
L100	LANDSCAPE PLAN
	LIGHTING PLAN

SEE ADDITIONAL PLANS PREPARED BY SCHARHAG ARCHITECTS.

McLAUGHLIN MUELLER, INC. HAS SOLE RESPONSIBILITY FOR SHEET 3. VSR DESIGN HAS SOLE RESPONSIBILITY FOR SHEET L100 AND PREMIER LIGHTING AND CONTROLS HAS SOLE RESPONSIBILITY FOR THE LIGHTING PLAN.

### ENGINEER'S CERTIFICATION:

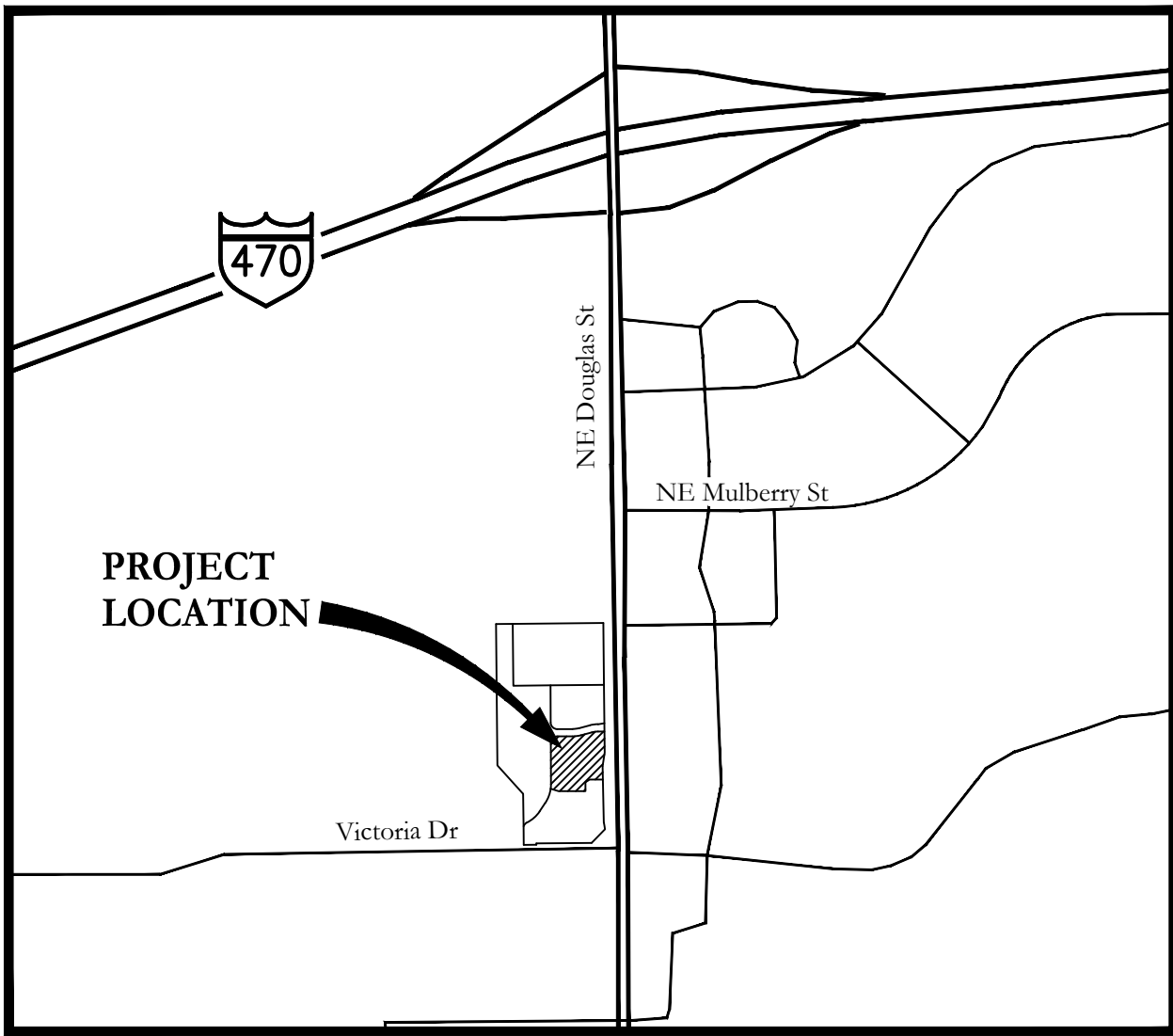
I hereby certify that this project has been designed, and these plans prepared, to meet or exceed the design criteria of City of Lee's Summit, Missouri, in current usage, except as indicated below.

Exceptions: 1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_

I have not been retained to coordinate as-built drawings for this project.



Ronald L. Cowger, PE  
AGC Engineers, Inc.



LOCATION MAP  
NOT TO SCALE

### CONTACTS

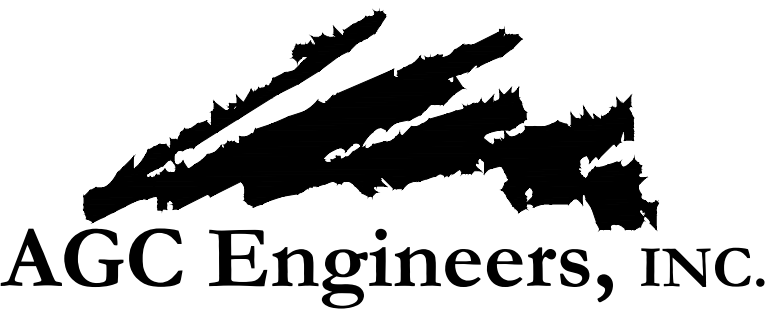
#### ENGINEERING

Engineering Alternate 781-4200  
Ronald L. Cowger, PE

Engineering Primary 781-4200  
Art Akin, PE

#### DEVELOPER

STAR ACQUISITIONS AND DEVELOPMENT, LLC  
TIM HARRIS  
244 W. MILL STREET, SUITE 101  
LIBERTY, MISSOURI, 64068  
(816) 781.3322



405 S. Leonard St., Suite D  
Liberty, Missouri 64068  
www.agcengineers.com  
816.781.4200 ■  
fax 792.3666

### STATUS

- ☒ FOR PERMIT  
☐ FOR CONSTRUCTION  
☐ PLANS CONFORMING TO CONSTRUCTION RECORDS

### DATE:

10-5-21

\_\_\_\_\_

\_\_\_\_\_

### LEGAL DESCRIPTION

LOT 3 OF THE FINAL PLAT OF OAKVIEW - LOTS 1-5, A REPLAT OF LOT 2, "MINOR PLAT, POLYTAINERS ADDITION, LOTS 1 AND 2" AND PART OF NE DOUGLAS STREET ALL IN THE NE 1/4 OF SEC. 31-48-31 IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

### FLOOD NOTE

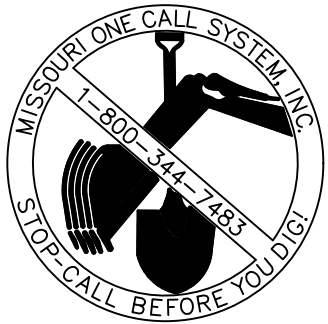
THIS PROPERTY DOES NOT LIE WITHIN A FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 2909SC0409G. DATED 1/20/2017

### OIL AND GAS WELL NOTE

THERE WAS NO OIL OR GAS WELLS LOCATED ON PROPERTY PER MISSOURI DEPARTMENT OF NATURAL RESOURCES OIL AND GAS PERMITS WEBSITE.

### UTILITIES AND PUBLIC AGENCIES

CITY OF LEE'S SUMMIT PUBLIC WORKS	Michael Park	(816) 969-1820
WATER UTILITIES	Jeff Thorn	(816) 969-1900
ELECTRIC EVERGY	Ron Dejarnette	(816) 347-4316
GAS SPIRE	Katie Darnell	(816) 969-2247
TELEPHONE AT&T	Marty Loper Mark Manion Darrin Shepherd	(816) 275-1550 (816) 325-6516 (816) 772-0336
CABLE COMCAST	Ryan Alkire	(816) 795-2218



### NOTE:

Contractor shall be responsible for determining the exact locations of all underground utilities or appurtenances prior to commencing construction. Existing underground utilities shown on the drawings are for reference only, and their accuracy and completeness are not guaranteed. Contractor shall be responsible for repair or replacement of all underground utilities damaged during construction.

BY	REVISION	DATE
RC/ACA	FOR REVIEW - REVISED PER 9-15-21 CITY COMMENTS	10-5-21
RC/ACA	FOR REVIEW	8-26-21

N:\Land Projects\Star Development - Oakview (Lee's Summit) - Lot 3\Drawings\Drawings-Plans\Final Development Plans\GENERAL NOTES & LEGEND - 10/5/2021 1:13:14 PM, ANS\lul\based D (04.00 x 22.00 inches), 1:1

GENERAL PROJECT NOTES:

- The Contractor shall, at a minimum, have the following document(s) at the job site at all times:  
Signed approved plans,  
Contract Documents and Project Specifications,  
Standard Specifications (Kansas City Metro Chapter-APWA)  
Storm Water Pollution Plan (SWPPP)  
All required permits
- The Contractor shall reference the City of Lee's Summit Design Criteria, Standard Specifications, Standard Details, Approved Products Lists found at the following website  
<https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure>
- This Project shall be constructed in accordance with these Plans, City of Lee's Summit criteria and specifications (listed above), and their absence the Kansas City Metro Chapter of American Public Works Association (most current version) "APWA".
- All work required to complete the project and that is not specifically itemized in the Contractor's proposal shall be considered subsidiary to other work itemized in the proposal.
- All materials and workmanship associated with this project shall be subject to inspection by the City of Lee's Summit and the Owner. The City and/or Owner reserves the right to accept or reject any such materials and workmanship that does not conform to the Standards and Technical Specifications.
- RESERVED
- The Contractor shall notify the Engineer immediately of any discrepancies in the Plans.
- By use of these Plans the Contractor agrees that he shall be solely responsible for the safety and protection of the construction workers and the public.
- Contractor is to obtain the necessary permits for all construction activities.
- Contractor shall be responsible for determining the exact locations of all underground utilities or appurtenances prior to commencing construction. Existing underground utilities shown on the drawings are for reference only, and their accuracy and completeness are not guaranteed. Contractor shall be responsible for repair or replacement of all underground utilities damaged during construction.
- RESERVED
- It shall be the responsibility of the Contractor to control erosion and siltation during all phases of construction.
- Any sidewalk, curb & gutter or pavement disturbed, damaged or destroyed during construction shall be replaced by Contractor at no additional cost to Owner.
- Modified curb shall be used at all locations where pavement drains away from curb.
- The Contractor shall contact the City's Development Service Engineering Inspectors 48 hours prior to beginning any work at (816) 969-1200.
- Contractor shall be responsible to install pavement joints on all concrete pavement, slabs, and / or sidewalk. At a minimum, an expansion joint shall be provided along all interfaces of
  - Building to sidewalk
  - Building to concrete pavement
  - Sidewalk to concrete pavementContractor shall submit a joint plan to the Engineer for review.

GRADING NOTES:

- Erosion protection shall be in place prior to any land disturbance.
- Contours shown are to finished grade.
- The construction area shall be cleared, grubbed, and stripped of topsoil and organic matter from all areas. Excess topsoil shall be stockpiled separately from compactable material. Stripping existing topsoil and organic matter shall be to a minimum depth of six (6) inches.
- Areas to receive fill shall be striped of top soil and other organic material, scarified, and the top eight (8) inch depth compacted to 98% standard proctor density prior to the placement of any fill material. Any unsuitable areas shall be undercut and replaced with suitable material before any fill material can be placed.
- Fill material shall be made in lifts not to exceed nine (9) inches depth compacted to 98% standard proctor density (per ASTM D-698) with a moisture content -3% and +2% optimum moisture. Contractor shall provide (at his/her sole cost) an independent geotechnical report certifying compaction at a sample interval of one (1) sample per 5000 square feet per lift or more frequent if required/recommended by the geotechnical firm. Geotechnical firm shall be approved by Owner prior to beginning fill operations. Fill material may include rock from on-site excavation if carefully placed so that large stones are well disturbed and voids are completely filled with smaller stones, earth, sand or gravel to furnish a solid embankment. No rock larger than three (3) inches in any dimension nor any shale shall be placed in the top 12 inches of embankment.
- In all areas of excavation, if unsuitable soil conditions are encountered, a qualified Geotechnical engineer shall recommend to the Owner on the methods of undercutting and replacement of property compacted, approved fill material.
- All slopes are to be 3:1 or flatter unless otherwise indicated.

- All slopes and areas disturbed by construction shall be graded smooth and a minimum four (4) inches of topsoil applied. If adequate topsoil is not available on-site, the Contractor shall provide topsoil, approved by the Owner, as needed. Any areas disturbed for any reason shall be corrected by the Contractor at no additional cost to the Owner prior to final acceptance of the project.
- All disturbed areas shall be seeded, fertilized and mulched or sodded in accordance with the standards and specifications adopted by the reviewing governing agency and good engineering practices.

EROSION CONTROL NOTES:

- Control of sediment is a very dynamic (ever changing) process. These plans are provided as a basis of anticipated erosion control measures. The Contractor shall modified add or delete with the Owner's permission the erosion control measure shown to prevent the migration of sediment off of the Owner's property and/or into jurisdictional waters/waterways.
- Any sediment deposited on public streets shall be removed immediately by Contractor at his sole expense.
- Stockpile excavation materials away from existing channels and grade to drain to adequate erosion control measures.
- Remove silt build up in temporary sediment basins (if applicable), inlet protection devices and/or silt fence until site is completely stabilized. Verify grade prior to final seeding, lining or rip-rap installation.
- All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Kansas City Metro Chapter of American Public Works Association. Seeding/Sodding shall be completed within 14 days after completing the work, in any area. If this is outside of the recommended seeding period, erosion control measures or other similarly effective measure shall remain and be maintained by Contractor until such time that the areas can be seeded and a stand of grass established per Missouri DNR or MoDOT Section 805.4 standards.
- When sediment deposits reach approximately one-half the height of the BMP, the sediment shall be removed or a second BMP shall be installed. All costs associated with this work, including related incidents, shall be the Contractor's responsibility and shall be included in the bid for the proposed work.
- Contractor shall perform BMP inspection once a week and after each rainfall event, and provide Owner a copy of report within 48 hrs. Faulty or inadequate erosion control measures shall be remediated or modified the same day of inspection so as to minimize the risk of sediment discharge from the Owner's property or jurisdictional waters/waterways.
- Contractor shall protect and maintain erosion control measures until a complete stand of grass as defined by Missouri DNR has been established.
- Concrete Washout Areas will be determined onsite by the Job Superintendent.
- At a minimum the following permits/approvals shall be posted on site or as required by the permit terms and conditions:  
City of Lee's Summit Land Disturbance Permit.
- Permanent fertilizing, seeding (Type "A") and mulch shall be in accordance with Kansas City Metro Chapter of American Public Works Association. Final acceptance per MoDOT Sections 805.4
- The Contractor shall install Erosion Control Blanket (ECB) on all slopes with 3:1 slope or greater. ECB shall be Landlok CS2 or approved equal.
- Provide temporary silt fencing at all pipe entrances until all site seeding and sodding has been established. Maintain as necessary.
- Immediately remove sediments or other materials tracked onto public roadways.
- Provide and maintain stabilized roadway construction entrance (or entrances as may be required).
- Coordinate site grading with existing and proposed utilities.
- Stock pile waste excavation materials away from existing channels and grade to drain.
- Remove silt build up in basin and verify grade prior to final seeding, lining or rip-rap installation and clean up.
- All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Standards and Specifications adopted by the City of Lee's Summit, MoDOT, MoDNR or other governing agency and good engineering practices.
- Silt fences, whether straw bales or filter fabric, require maintenance to preserve their effectiveness. All silt fences shall be inspected immediately after each heavy rainstorm and at least daily during prolonged rainfall. Any required repairs shall be made immediately. When sediment deposits reach approximately one-half the height of the silt fence, the sediment shall be removed or a second silt fence shall be installed. All costs associated with this work, including related incidentals, shall be the contractor's responsibility and shall be included in the bid for the proposed work.

WATER NOTES:

- Reference MEP Plans to confirm fire protection main size (if required), domestic water and meter sizes. If a discrepancy exists between the Plans contact the Engineer prior to ordering material.
- Domestic water shall be 3/4-inch & 1-inch soft "k" copper conforming to the latest federal specifications or cross-linked polyethylene (PEX) meeting current City Code.
- Minimum cover for water lines shall be 42 inches.
- Install fittings as required. maximum pipe deflection per manufacturers recommendations.
- Install 3/4-inch tap and 3/4-inch service to 3/4-inch water meter at property line (on private property side). Extend 1-inch domestic water from water meter to building.
- All water service installation, including back-flow devices, are subject to field verification and approval by City inspector.

REFERENCE DOCUMENTS & DRAWINGS:

Contractor shall reference the following documents prior to beginning Work  
1. Architectural Plans (including but not limited to MEP and Structural Plans)  
2. Landlord Work Order list from Star Acquisitions and Development, LLC

STORM NOTES:

- All HDPE pipe shall be Water-Tight
- All High Density Polyethylene (HDPE) pipe shall conform to AASHTO M294 Type S. Acceptable pipe must come from a Plastic Pipe Institute (PPI) certified manufacturer and have passed the PPI 3rd Party Certification testing. Each individual section of pipe shall be marked in accordance with AASHTO M294 and shall be affixed with the PPI Certification label. HDPE pipe shall be joined with water tight joints meeting the requirements of AASHTO M294 Paragraph 7.9.3.
- Pipe lengths are from inside face to inside face.
- End sections for HDPE pipe shall be metal with concrete toe wall unless noted otherwise.

ELECTRIC:

- Contractor to coordinate with Evergy Electric for electrical service.
- Contractor to coordinate with Evergy Electric for location of transformer pad and transformer if required.

GAS:

- Contractor to coordinate with Spire for gas service, and location of meter.

TELEPHONE:

- Site contractor to install PVC conduit(s) for use by telephone company. Site contractor to coordinate with telephone company for installation of service and location of proposed pedestals, etc. Telephone conduit shall have a minimum cover of 30". Site contractor shall coordinate location with telephone company representative and locate PVC crossings as necessary. See building plans for entrance locations.

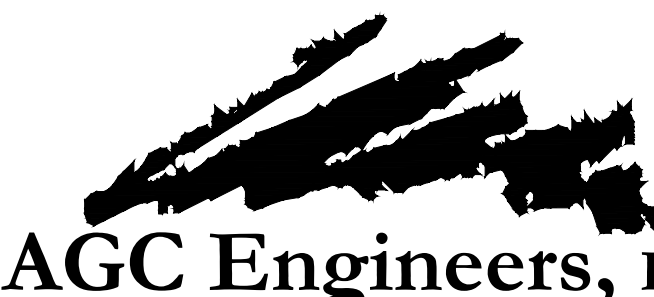

LEGEND

EXISTING

- SET MONUMENT AS NOTED STAMPED LS 1999141096
- FOUND 1/2" REBAR LS 1989
- FOUND MONUMENT AS NOTED
- MEASURED DISTANCE
- CONTROL POINT
- DOWN GUY
- FIRE HYDRANT
- LIGHT POLE
- POWER POLE
- POST
- MANHOLE
- WATER VALVE
- BUILDING LINE
- DRAINAGE EASEMENT
- AERIAL UTILITY
- SANITARY SEWER EASEMENT
- UTILITY EASEMENT
- UNDERGROUND GAS
- UNDERGROUND POWER
- UNDERGROUND TELEPHONE
- UNDERGROUND WATER

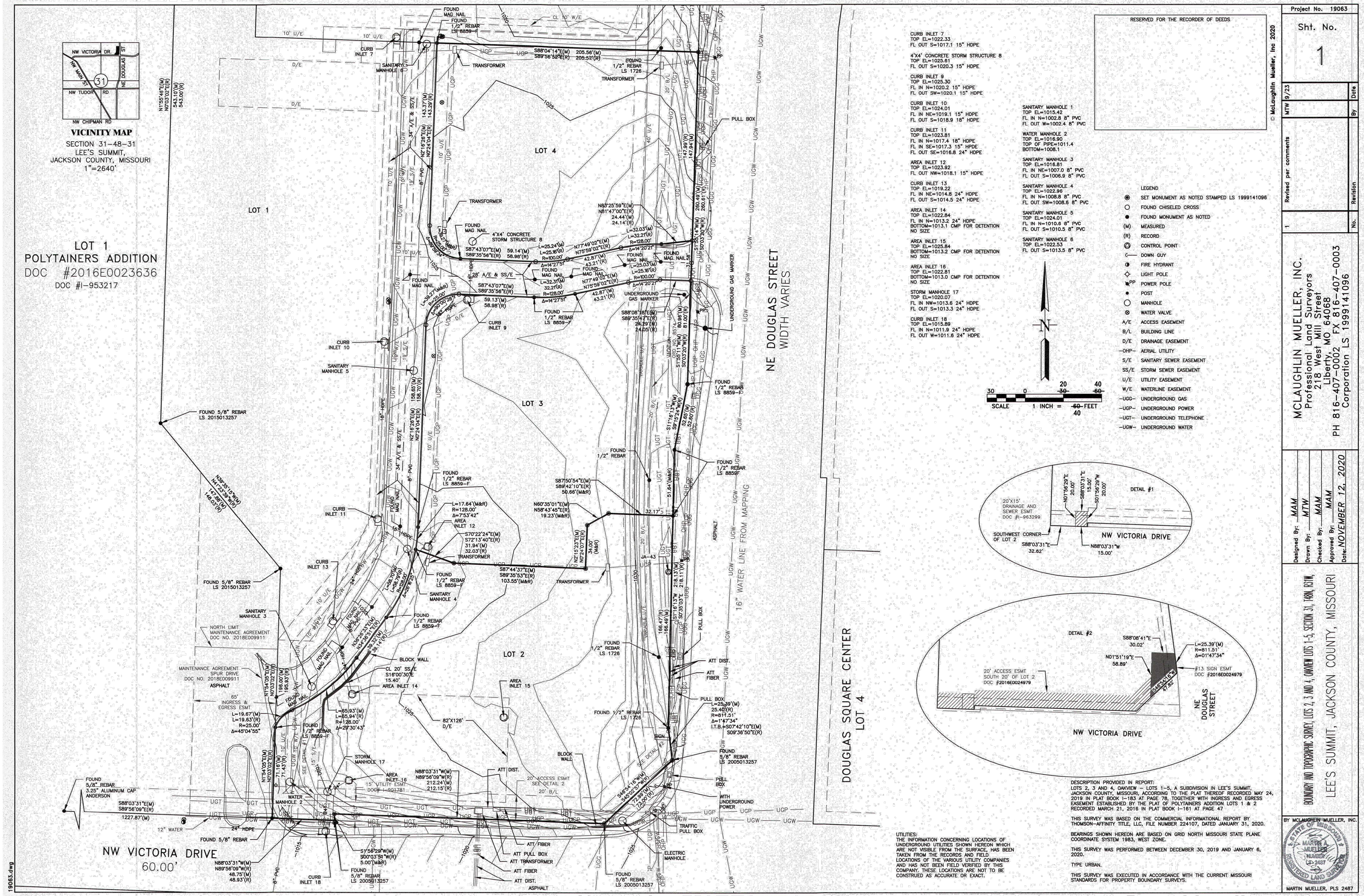
PROPOSED

- SANITARY STRUCTURE
- SANITARY SEWER
- STORM STRUCTURE
- STORM SEWER
- WATERLINE
- WATER METER
- WATER VALVE
- GAS LINE
- CLEANOUT
- PARKING COUNT
- CONTOUR
- LIGHT POLE (SITE PARKING)
- DRAINAGE EASEMENT
- GAS METER
- WATER METER
- ELECTRIC EASEMENT
- UTILITY EASEMENT
- BUILDING LINE SETBACK
- MANHOLE
- RADIUS OR RAMP (as it relates to sidewalks)
- LANDING (as it relates to sidewalks)
- SIDEWALK
- AIR CONDITIONER
- MECHANICAL, ELECTRICAL & PLUMBING
- WATER SERVICES DEPARTMENT
- DOWN SPOUT
- TOP OF CURB
- GROUND
- PAVEMENT
- LOW POINT
- HIGH POINT

BY	REVISION	DATE	<div></div> <div>405 S. Leonard St., Suite D Liberty, Missouri 64068</div> <div>816.781.4200 ■ fax 792.3666</div> <div>www.agcengineers.com</div>	<div></div> <div>OAKVIEW - LOT 3 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI</div>	SITE DEVELOPMENT PLANS	
RC/ACA	FOR REVIEW - REVISED PER 9-15-21 CITY COMMENTS	10-5-21			GENERAL NOTES & LEGEND	
RC/ACA	FOR REVIEW	8-26-21			2	



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OAKVIEW - LOT 3  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS  
EXISTING CONDITIONS



**SITE DATA:**

						Land Area (sf)										Parking Data				Impervious Area
Lot No.	Address	Existing Zoning	Proposed Zoning	Proposed Use	Anticipated Schedule	Gross	R/W	POS <sup>(1)</sup>	POS <sup>(2)</sup>	Parkland	Net	Proposed Building Area (sf)	No. Stories	FAR	Criteria Used	as compared to UDO	required parking	provided parking	Acreage Impervious / % Impervious	
3	1430 NE Douglas St	CP-2	CP-2	restaurant/retail	2020-2022	40,893.46	0.000	0.000	0.000	0.000	40,893.46	4,800	1	0.12	50% primarily drive-thru user (use 10/1000) 50% retail/office (use 5/1000)	reduced 4/1000 (9.6 stalls) meets UDO	24 12	38	0.33 AC / 35%	
totals						40,893.46														
Legend						Special Parking Notes:														
POS <sup>(1)</sup> = Private Open Space not intended to be counted toward parkland dedication						1. UDO parking ratios														
POS <sup>(2)</sup> = Private Open Space to be counted toward parkland dedication						drive thru/sit down 14/1000														
FAR = Floor Area Ratio						drive thru only 2/1000 + 1/employee at max shift														
Notes:						office 4/1000														
						retail 5/1000														
1. At the election of the Developer the units may be FOR SALE or FOR RENT/LEASE.																				
						2. See parking generation letter dated August 27, 2020														

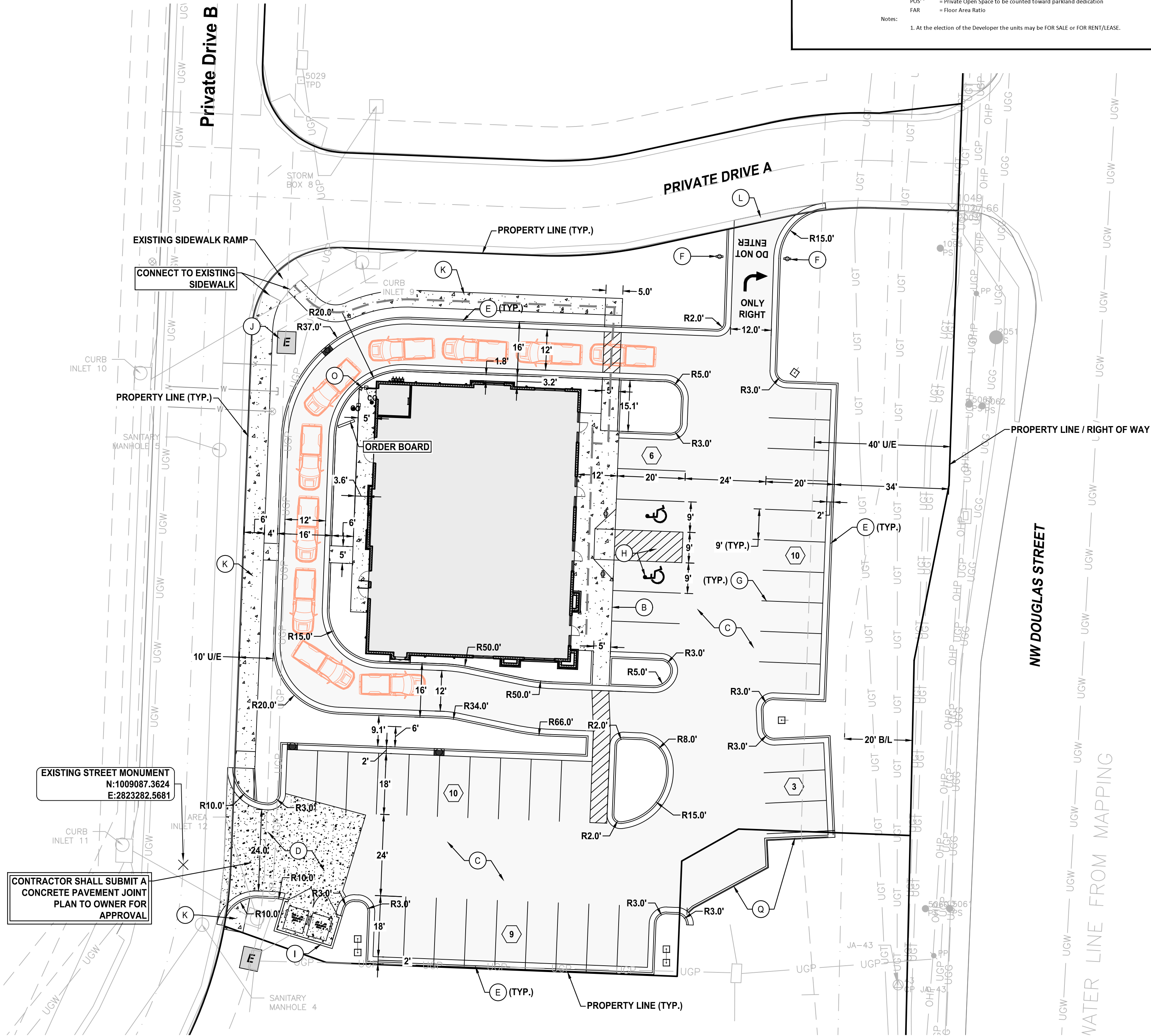
**LEGEND:**

**ADA PEDESTRIAN ROUTE (RE: SPOT ELEVATION PLAN)**

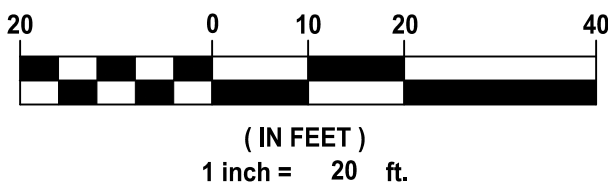
## PARKING STALL COUNTS

### KEY LEGEND

- (A) CURB INLET - 2'X3' NYLOPLAST**
- (B) INTEGRAL SIDEWALK / CURB**
- (C) CONCRETE PAVEMENT**
- (D) HEAVY DUTY CONCRETE**
- (E) CG-1 SPOT & GUTTER  
(RE: CURB ELEVATION PLANS)**
- (F) DO NOT ENTER SIGN**
- (G) PARKING STRIPING - 4" YELLOW**
- (H) STRIPING - (RE: ADA ACCESSIBLE  
STRIPING LAYOUT)**
- (I) TRASH ENCLOSURE (RE: ARCH)**
- (J) ELECTRICAL TRANSFORMER**
- (K) PROPOSED CONCRETE SIDEWALK**
- (L) VALLEY GUTTER**
- (M) LIGHT POLE (RE: MEP)**
- (N) RELOCATE EVERYGY FACILITIES**
- (O) HANDRAIL TO PROTECT AGAINST  
VERTICAL DROP**
- (P) NOT USED**
- (Q) TYPE C-1 CURB**



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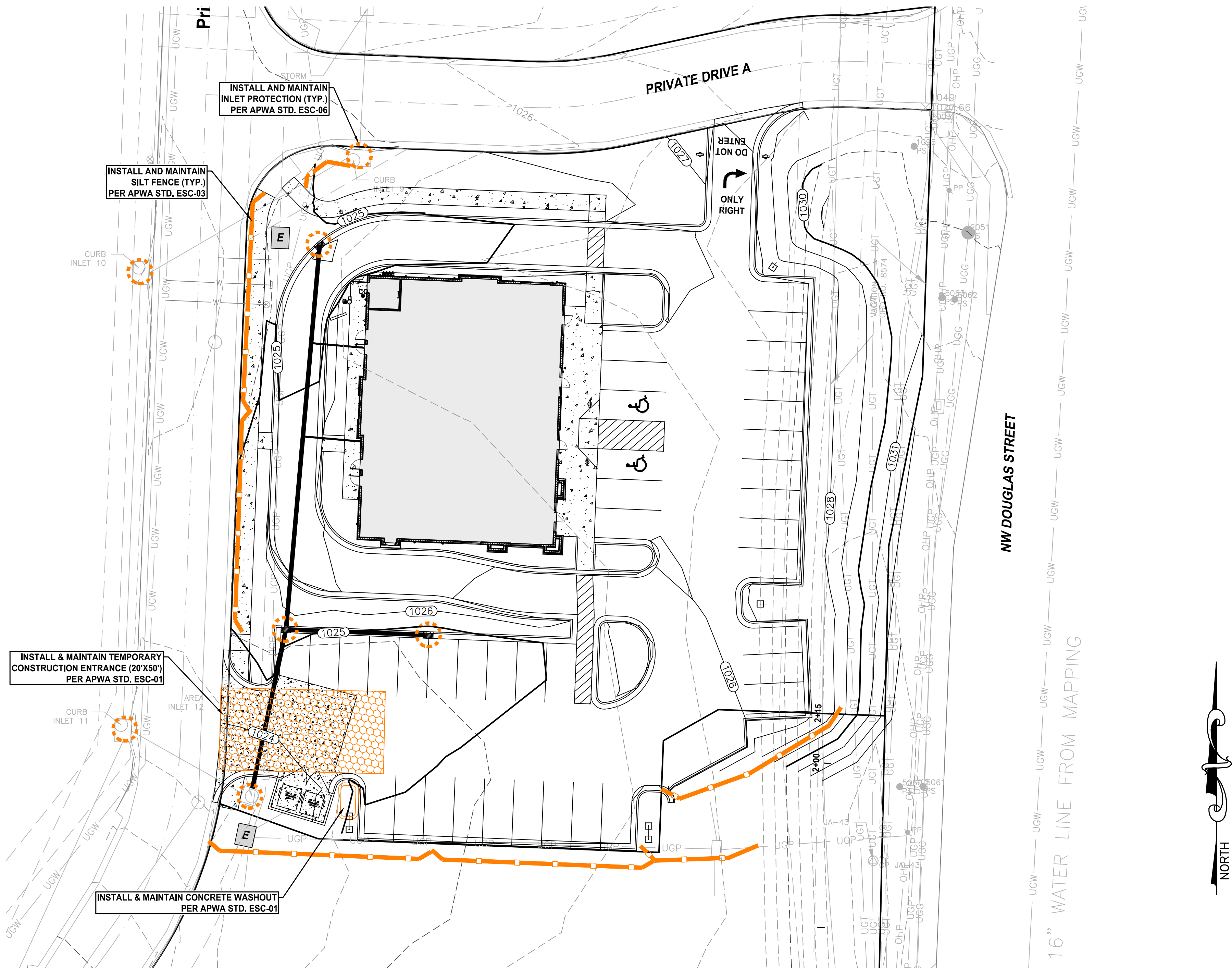
# SITE DEVELOPMENT PLANS

## SITE PLAN

4



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**LEGEND:**

**EROSION CONTROL**

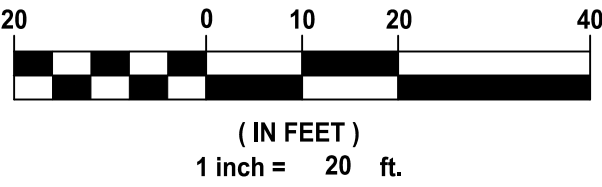


INLET PROTECTION PER APWA STD. DWG ESC-06  
SILT FENCE PER APWA STD. DWG ESC-03

**NOTES:**

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE BEFORE GRADING.
2. REMOVE TEMPORARY BMPs AFTER PAVING IS COMPLETED AND PERMANENT GRASS IS ESTABLISHED.
3. DISTURBED AREA = 0.92 AC

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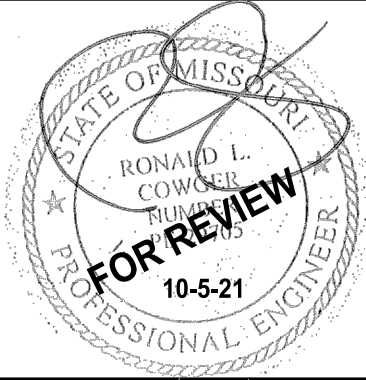


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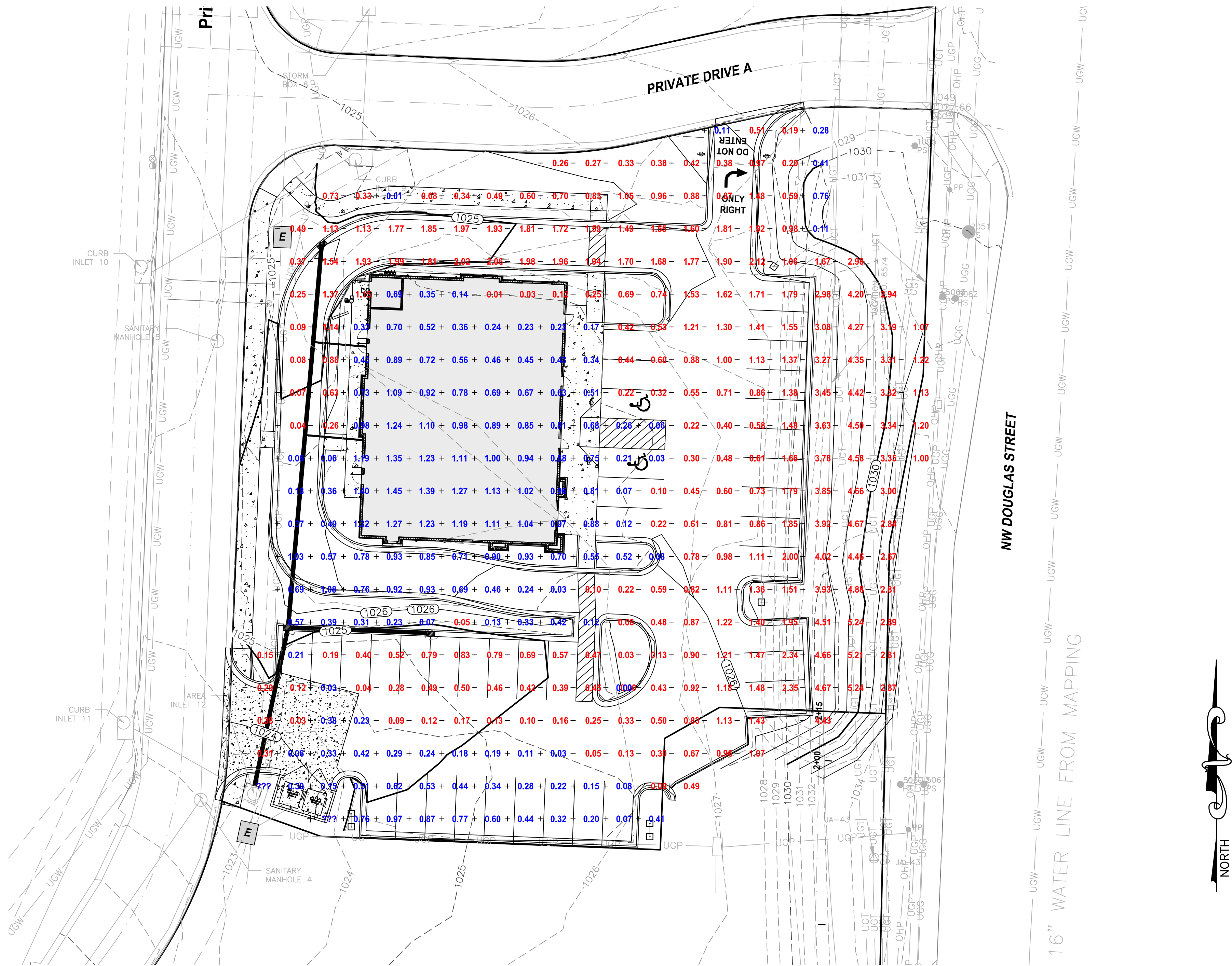


OAKVIEW - LOT 3  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS  
GRADING & EROSION CONTROL PLAN



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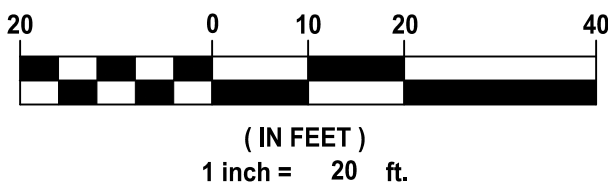


**LEGEND:**

- CUT AREA
- + FILL AREA

NOTE:  
CUT / FILL SHOWN IS TO FINISHED GRADE AND / OR  
TOP OF PAVEMENT

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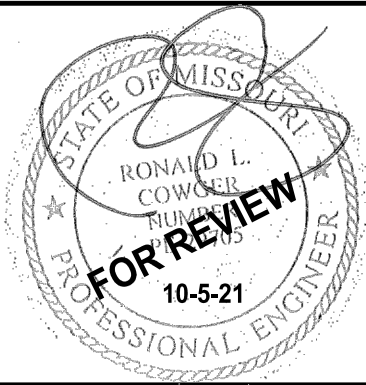


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SITE DEVELOPMENT PLANS  
GRADING PLAN - CUT & FILL

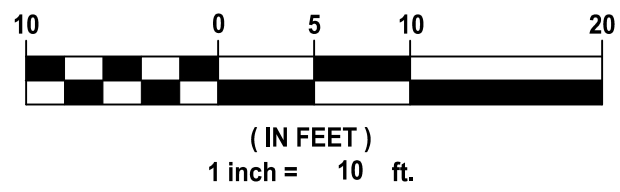


3. SANITARY SEWER CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTSIDE BOTTOM OF THE WATER MAIN AND THE OUTSIDE TOP OF THE SANITARY SEWER. MAINTAIN EIGHTEEN INCHES (18") MINIMUM SEPARATION FROM THE TOP OF THE SANITARY SEWER TO THE BOTTOM OF THE WATER MAIN. WHEN WATER LINE GOES UNDER A SANITARY SEWER THEN THE SANITARY SEWER SHOULD BE PRESSURE RATED PIPE OR ENCASED IN CONCRETE.

- A DOMESTIC WATER ENTRY (RE: MEP)
- A1 IRRIGATION WATER ENTRY (RE: MEP)
- B 3/4" DOMESTIC WATER TAP AND SERVICE LINE TO METER (CONFIRM WITH MEP PRIOR TO INSTALLATION) REFER TO WATER NOTES ON SHEET
- B1 1" DOMESTIC WATER LINE (CONFIRM WITH MEP PRIOR TO INSTALLATION) REFER TO WATER NOTES ON SHEET 2
- C 3/4" WATER METER AND METER PIT
- D GAS ENTRY (RE: MEP)
- E 1" GAS LINE (RE: MEP FOR GAS SIZE AND MATERIAL)
- F SANITARY SEWER ENTRY (RE: MEP)
- G 6" SANITARY SEWER LINE (2% MIN. SLOPE)
- H CLEANOUT
- I PHONE / DATA SERVICE ENTRY (RE: ARCH)
- J ELECTRICAL TRANSFORMER (RE: MEP)
- K DOWNSPOUT (RE: ARCH) (SEE DOWNSPOUT DRAIN DETAIL)
- L 6" PVC DOWNSPOUT STORM LINE (MIN. 4% SLOPE)
- M CONNECT TO EXISTING SECTIONALIZ (CONTRACTOR TO COORDINATE WITH EERGY)
- N 1" IRRIGATION LINE (CONFIRM WITH MEP PRIOR TO INSTALLATION)

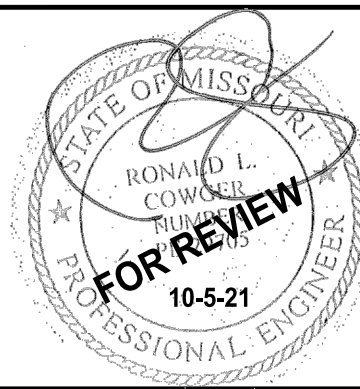


BY	REVISION	DATE
RC/ACA	FOR REVIEW - REVISED PER 9-15-21 CITY COMMENTS	10-5-21
RC/ACA	FOR REVIEW	8-26-21



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OAKVIEW - LOT 3  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

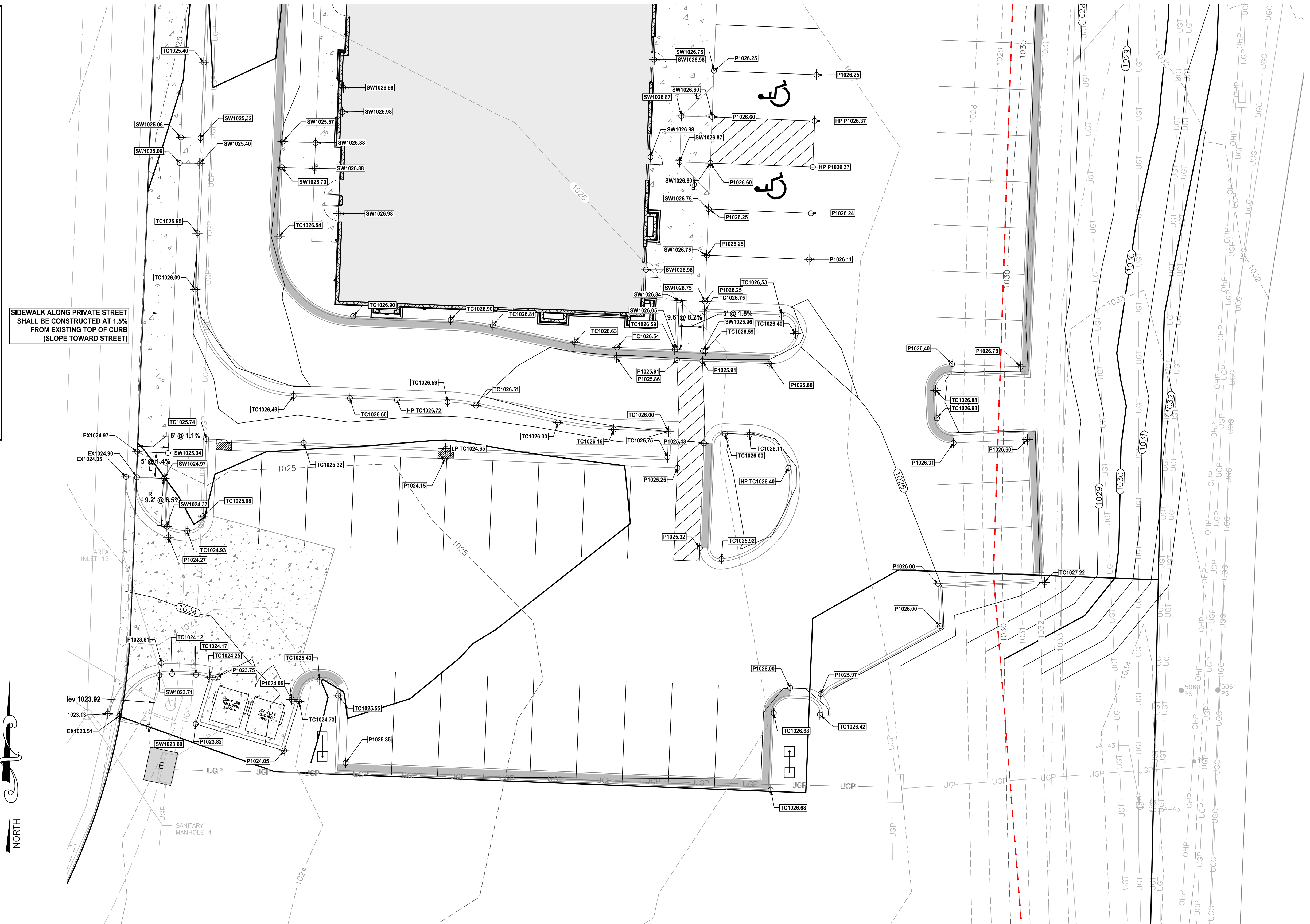
## SITE DEVELOPMENT PLANS

### UTILITY PLAN

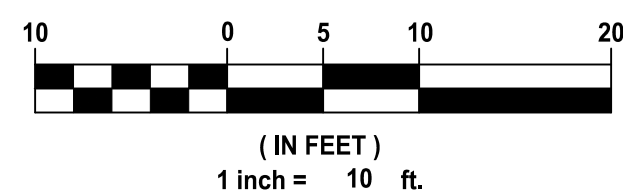






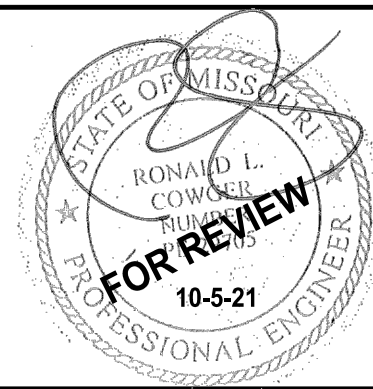


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RC/ACA	FOR REVIEW - REVISED PER 9-15-21 CITY COMMENTS	10-5-21
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## SITE DEVELOPMENT PLANS

### SPOT ELEVATION PLAN



N:\Land Projects\Site Development - Oakview (Lee's Summit) - Lot 3\Drawings\Drawings\Plans\Final Development Plans\Drainage AREA MAP & CALCS.dwg, DRAINAGE AREA MAP & CALCS, 10/5/2021 1:15:00 PM, ANSI full bleed D (34.00 x 22.00 inches), 1:1

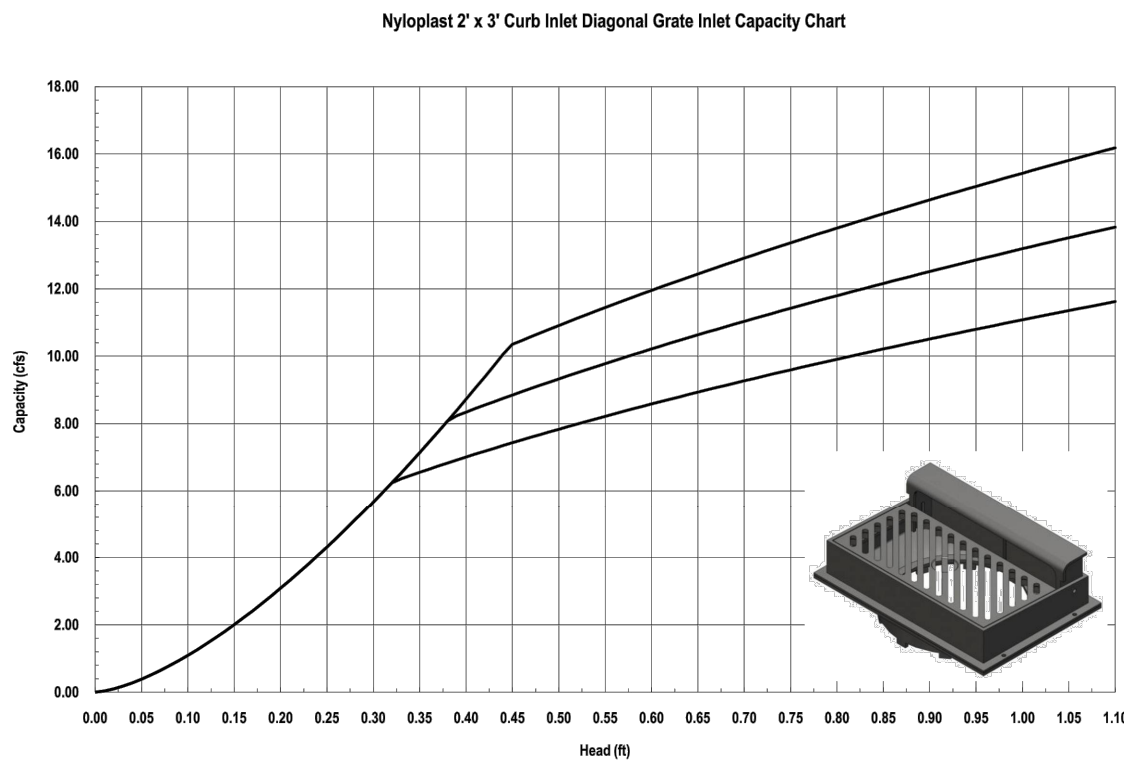
CURB INLET DESIGN TABLE																											
Return Frequency 10 yr																											
Inlet Box #	Return Frequency 10 yr												Gutter Capacity					Inlet Capacity									
	Overland Flow (ft)				Gutter Flow (ft)				Wet Time	K	Area	Q	Block of Curb to Block of Curb (Outer Type 1 "C" 1' x 2' + Curb 2')	Arrows	Street Cross Slope	Max. Gutter Depth	Gutter Cap.	Gutter Capacity (cfs) (Outer type is positive +)	Slope	100% (ft)	80% Capacity	80% Capacity	Inlet Capacity (cfs) (Outer type is positive +)				
	L	S	C	(ft)	L	S	C	(ft)	T <sub>i</sub>	T <sub>g</sub>	T <sub>e</sub>																
	(ft)	(%)	(%)	(%)	(ft)	(%)	(%)	(%)	(min)	(min)	(min)																
11L	15	2	0.9	105	1.5	0.014	1.11	0.36	5.00	1.00	7.35	D	0.07	0.5	28	1	10.5	2.08	0.24	1.04	3.6	-3.1					
11R	80	2	0.9	110	1.5	0.014	2.72	0.38	5.00	1.00	7.35	C	0.30	2.0	28	1	10.5	2.08	0.24	1.04	3.6	-1.6					
DS-1	70	0.5	0.9	1	0.5	0.014	3.79	0.00	5.00	1.00	7.35	B1	0.06	0.4													
DS-2	70	0.5	0.9	1	0.5	0.014	3.79	0.00	5.00	1.00	7.35	B2	0.05	0.3													
20L	15	2	0.9	105	1.5	0.014	1.11	0.36	5.00	1.00	7.35	A2	0.06	0.4	28	1	10.5	2.08	0.24	1.04	3.6	-3.2					
20R	100	2	0.9	59	2.5	0.014	2.86	0.13	5.00	1.00	7.35	A1	0.32	2.1	28	1	10.5	2.08	0.24	1.04	4.6	-2.5					
20																											
EX-6	80	2	0.9	180	2	0.014	2.22	0.54	5.00	1.00	7.35	LOT 4	0.57	3.8													
EX-4	10	2	0.9	140	2	0.014	0.91	0.42	5.00	1.00	7.35	EX-1 & EX-2	0.30	3.5	28	1	10.5	2.08	0.24	1.04	4.1	-2.1	2	5	8.80	5.44	-3.45
EX-3	10	2	0.9	75	1.5	0.014	0.91	0.26	5.00	1.00	7.35	EX-3	0.09	1.0	28	1	10.5	2.08	0.24	1.04	3.6	-3.0	1.5	5	7.05	5.44	-3.04
EX-2	10	2	0.9	80	1	0.014	0.91	0.25	5.00	1.00	7.35	EX-4	0.07	0.5	28	1	10.5	2.08	0.24	1.04	2.9	-2.4	1	5	7.00	5.84	-3.58
EX-1	10	2	0.9	100	2	0.014	0.91	0.30	5.00	1.00	7.35	EX-5	0.20	1.3	28	1	10.5	2.08	0.24	1.04	4.1	-2.8	2	5	6.80	5.44	-4.12

Return Frequency 100 yr																		Gutter Capacity					Inter Capacity																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Inlet Box #	Risk of Curb to Backside of Curb										Risk of Curb to Backside of Curb	Inlet Type (1 = C&G, 1c 2 = G&Z)	Arithmetic gutter spread					Inter Capacity (assume 4" bypass, conditions as typical)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	Overland Flow (ft)			Gutter Flow (ft)			Inlet Time			K			I	Area	Q	Street Cross Slope	Slope	Inlet Depth	Max. Gutter Area	Inlet Slope	Inter Capacity (assume 4" bypass, conditions as typical)	Inter Capacity (assume 4" bypass, conditions as typical)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	L	S	C	L	S	C	T <sub>i</sub>	T <sub>g</sub>	T <sub>c</sub>														L	S	C	W	W	W	W	W	W	W																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
(ft)	(%)	(%)	(ft)	(%)	(%)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	(min)	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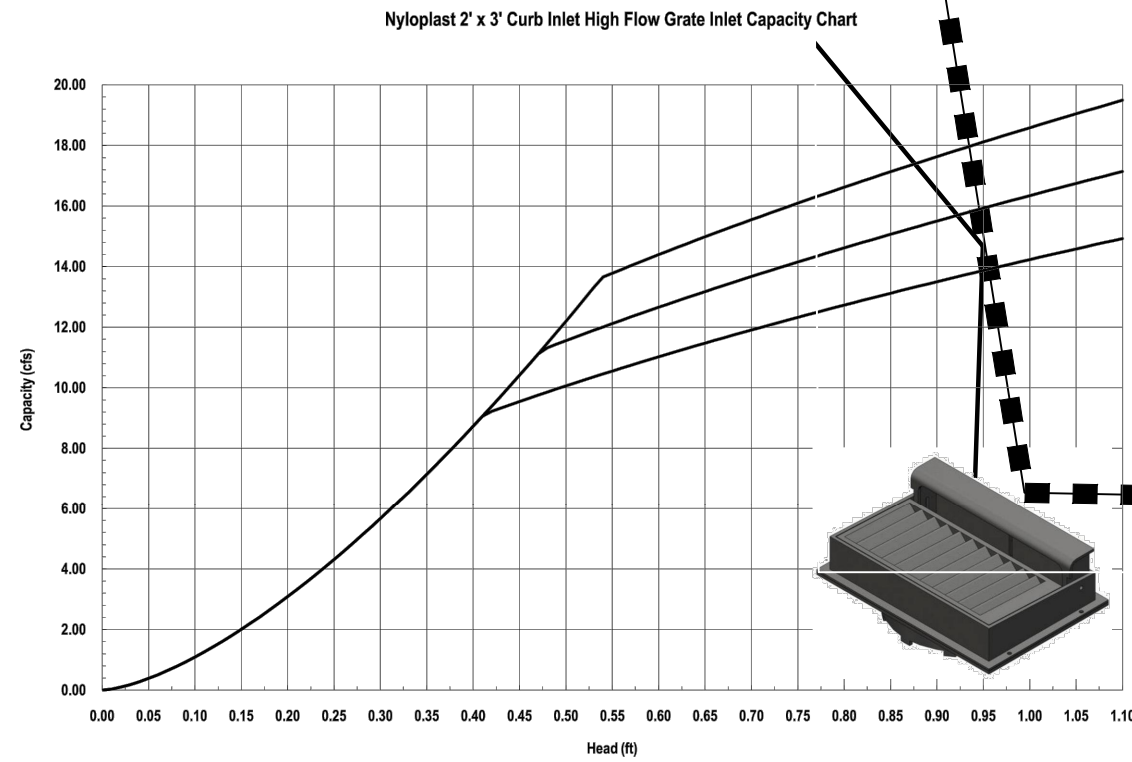
PIPE DESIGN TABLE																								
Return Frequency 10 yr												Pipe Capacity												
Line	Inlet Street & Inlet Type											Pipe Capacity												
		Inlet	Pipe	K	C	I	A	Total	Pipe	Pipe	Mannings	slope	Capacity	Full Pipe Capacity	Full Pipe Velocity	Pressure Flow Pipe Velocity	Gravity Flow Pipe Velocity	Minor Head Loss Coefficient	Gravity V/2g	Pressure W/2g	Length to Transition Point	Pressure Loss # Friction		
		Tc (min)	Tc (min)			Pipe (in/hr)	I (ac)	A (ac)	Pipe (cfs)	dia. (in)		%	(ft)	(ft)	(ft/s)	(ft/s)	(ft/s)	"K"	feet	feet	(ft)	%	ft	
1	11 CI	CI	5.00	5.00	1.00	0.84	7.35	0.37	0.37	2.3	15	0.012	1.11	7.4	6.0	5.3	1.9	0.48	1.00	0.44	0.05	33	0.11%	
	DS-1	CI	5.00	5.10	1.00	0.84	7.32	0.06	0.43	2.6	15	0.012	1.11	7.4	6.0	5.5	2.2	0.51	0.40	0.19	0.03	28	0.14%	
	DS-2	CI	5.00	5.10	1.00	0.84	7.30	0.05	0.48	2.9	15	0.012	1.11	7.4	6.0	5.6	2.4	0.54	0.40	0.20	0.04	36	0.15%	
	10 JB	N/A	5.10	1.00	0.84	7.30	0	0.86	5.3	15	0.012	1.74	9.3	7.5	7.8	4.3	0.68	0.40	0.38	0.11	52	0.56%		
	EX-7 JB	N/A	5.35	1.00	0.84	7.24	0	0.86	5.2	15	0.012	2.05	10.0	8.2	8.3	4.3	0.64	0.40	0.42	0.11	39	0.55%		
EX-2	CI	5.00	5.30	1.00	0.84	7.26	0.07	1.89	11.5	24	0.012	2.35	37.7	120	10.4	3.7	0.74	0.40	0.67	0.08	85	0.22%		
EX-1	CI																							
2	20 CI	CI	5.00	5.00	1.00	0.84	7.35	0.38	0.38	2.3	15	0.012	2.31	10.7	8.7	6.9	1.9	0.39	0.40	0.29	0.02	43	0.11%	
	15 JB																							

slopes used for EX pipes are from field survey prepared by Mcd. J. Austin Mueller Survey circa 2020

Return Frequency 100 yr										Pipe Capacity													
Line	Inlet Street & Inlet Type	Flow to Inlet		K	C	I	A	A	Pipe Capacity	Pipe Slope	Mannings	Pipe Slope	Full Pipe Capacity	Full Pipe Velocity	Gravity Flow Pipe Pressure	Pressure Flow Pipe Velocity	Gravity Flow Pipe Depth	Minor Head Loss Coefficient	Gravity M/Fig	Pressure M/Fig	Length to downstream structure	Slope of Inlet	Slope of Pipe
		Tc (min)	Tc (min)																				
1	11 CI	5.00	5.00	1.25	0.84	10.32	0.37	0.37	4.0	15	0.012	1.11	7.4	6.0	6.1	3.3	0.65	1.0	0.6	0.17	33	0.33%	
DS-1	CI	5.10	5.10	1.25	0.84	10.28	0.40	0.43	4.6	15	0.012	1.11	7.4	6.0	6.3	3.8	0.71	0.4	0.2	0.09	28	0.44%	
DS-2	CI	5.10	5.10	1.25	0.84	10.24	0.05	0.48	5.2	15	0.012	1.11	7.4	6.0	6.5	4.2	0.76	0.4	0.3	0.11	26	0.54%	
10 JB	N/A	5.19	1.25	0.84	10.24	0	0.86	9.3	15	0.012	1.74	9.3	7.5	8.6	7.5	1.01	0.4	0.5	0.35	52	1.73%		
EX-7	JB	N/A	5.35	1.25	0.84	10.18	0	0.86	9.2	15	0.012	2.05	10.0	8.2	8.3	7.5	0.94	0.4	0.5	0.35	39	1.11%	
EX-2	CI	5.00	5.00	1.25	0.84	10.20	0.07	1.89	20.2	24	0.012	2.35	37.7	120	12.2	6.4	1.04	0.4	0.9	0.26	85	0.88%	
EX-1	CI																						
2	20 CI	5.00	5.00	1.25	0.84	10.32	0.38	0.38	4.1	15	0.012	2.31	10.7	8.7	8.1	3.4	0.54	0.4	0.4	0.07	43	0.34%	
15 JB																							

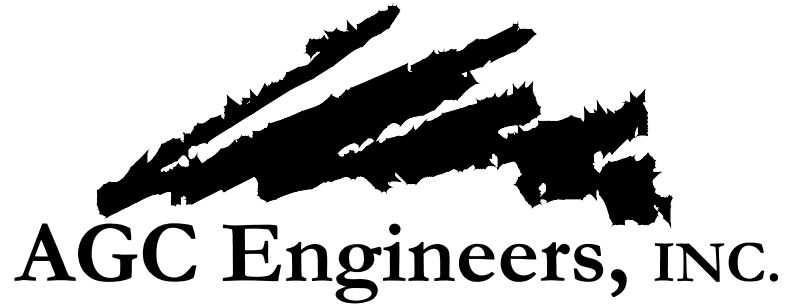
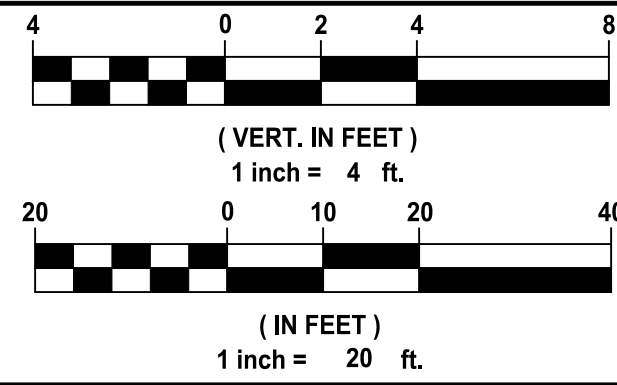


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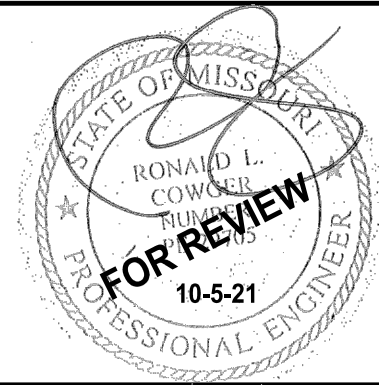


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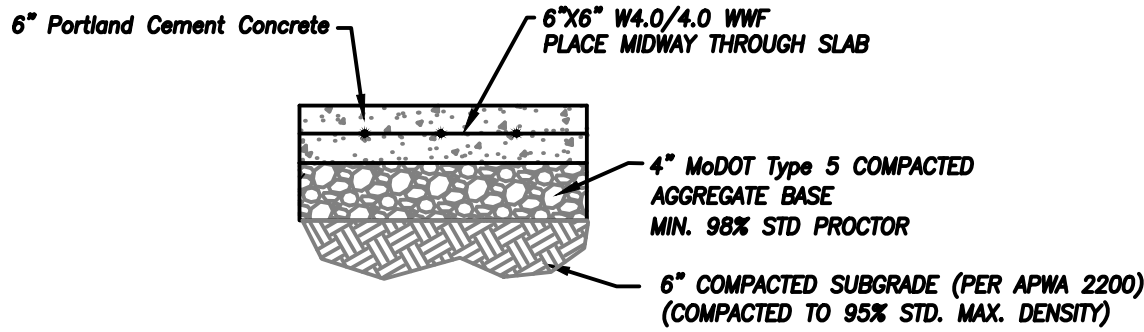


## SITE DEVELOPMENT PLANS

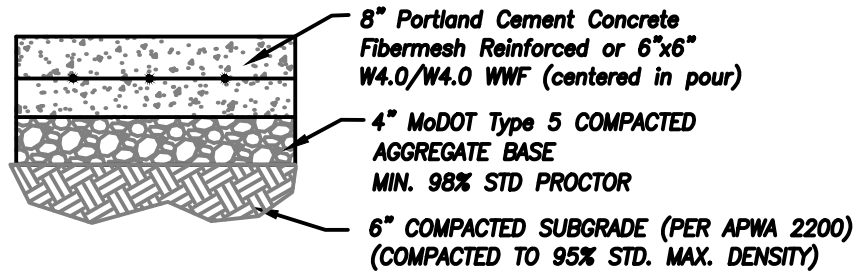
### STORM PLAN & PROFILES



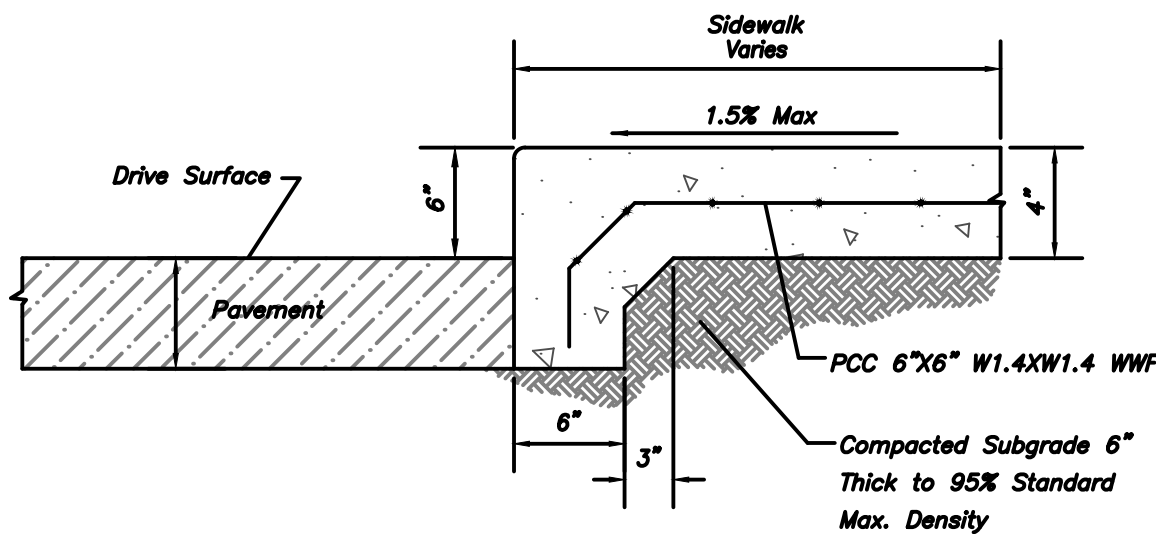
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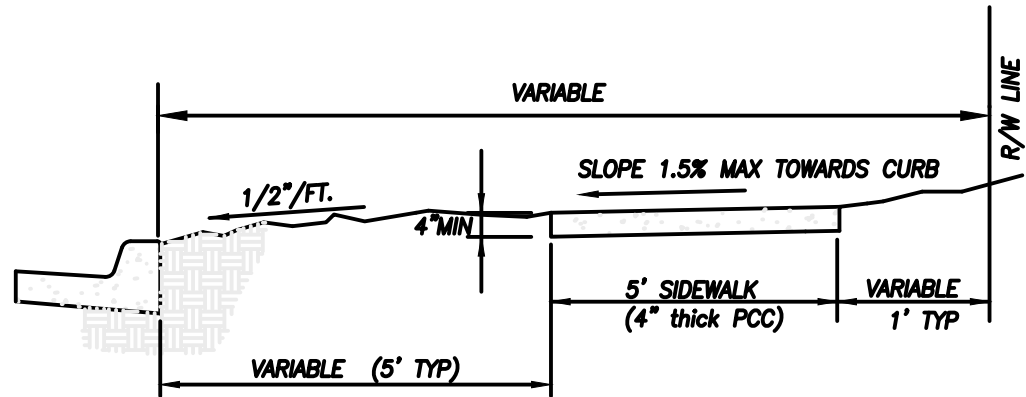
CONCRETE SECTION  
NOT TO SCALE



REINFORCED CONCRETE PAVEMENT SECTION  
@ TRASH ENCLOSURE AND DRIVE THRU  
NOT TO SCALE

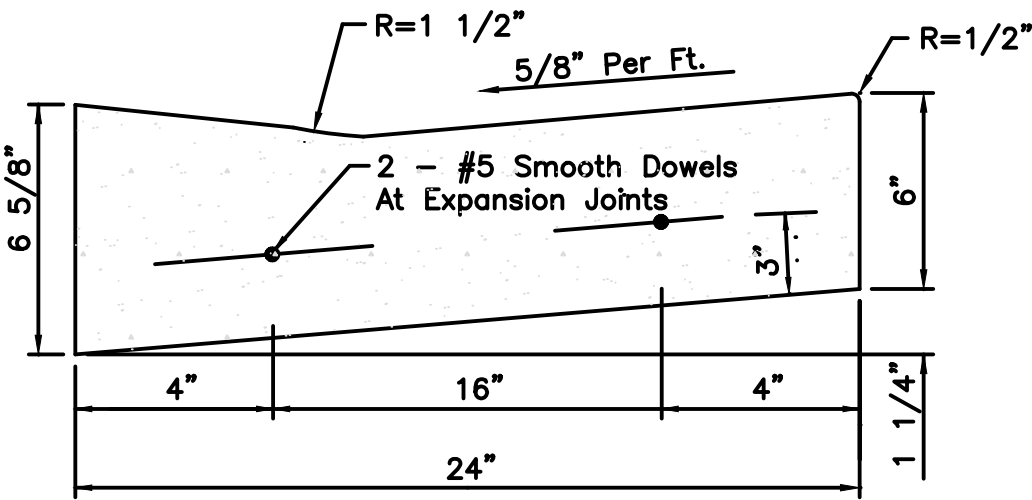
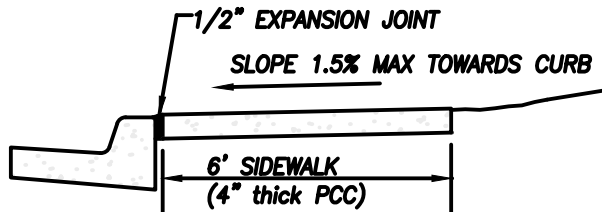


INTEGRAL SIDEWALK / CURB DETAIL  
NOT TO SCALE

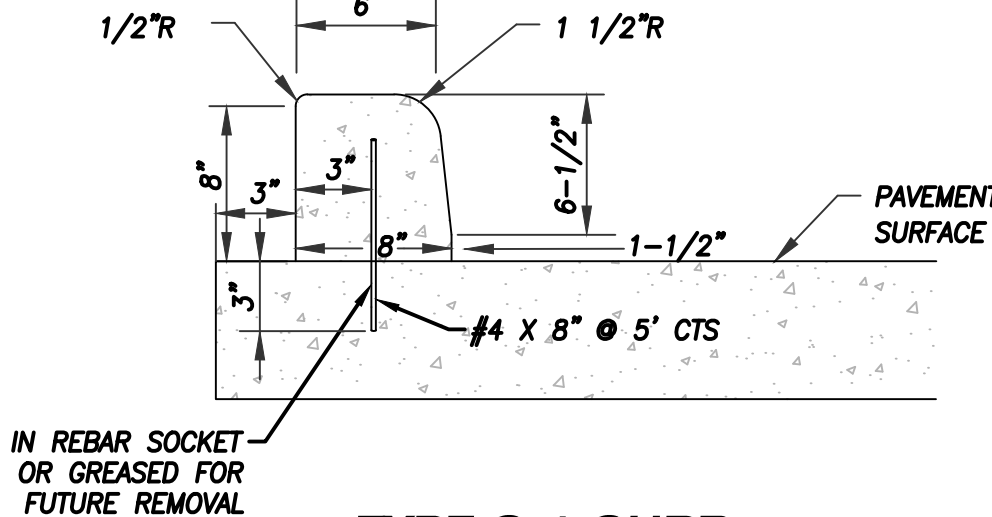


- NOTES:
- JOINTS SHALL BE FORMED AT RIGHT ANGLES TO THE ALIGNMENT OF THE SIDEWALK AND TO THE DEPTHS INDICATED BELOW.
  - THE SIDEWALK SHALL BE MARKED OFF INTO SQUARE SECTIONS (PICTURE FRAMED) BY CONTRACTION JOINTS. CONTRACTION JOINTS SHALL BE ONE-EIGHTH (1/8) INCH WIDE BY ONE (1) INCH DEEP AND SHALL BE FORMED BY TOOLING.
  - EXPANSION JOINTS SHALL BE FORMED BY A ONE-HALF (1/2) INCH THICK PREFORMED JOINT FILLER, EXTENDING THE FULL DEPTH OF THE SLAB, AND SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTING THE CONCRETE AT THESE JOINTS.
  - EXPANSION JOINTS SHALL BE PLACED WHERE SIDEWALK ABUTS OTHER STRUCTURES AND SHALL NOT BE SPACED MORE THAN 50 FT APART ON STRAIGHT RUNS FOR HAND LAID SIDEWALK AND NOT MORE THAN 100 FT APART ON STRAIGHT RUNS FOR MACHINE LAID SIDEWALKS.
  - SIDEWALK TO BE INSTALLED ON COMPACTED SUBGRADE (MIN 95% STD PROCTOR). CONTRACTOR MAY ELECT TO INSTALL AGGREGATE LEVEL COURSE.

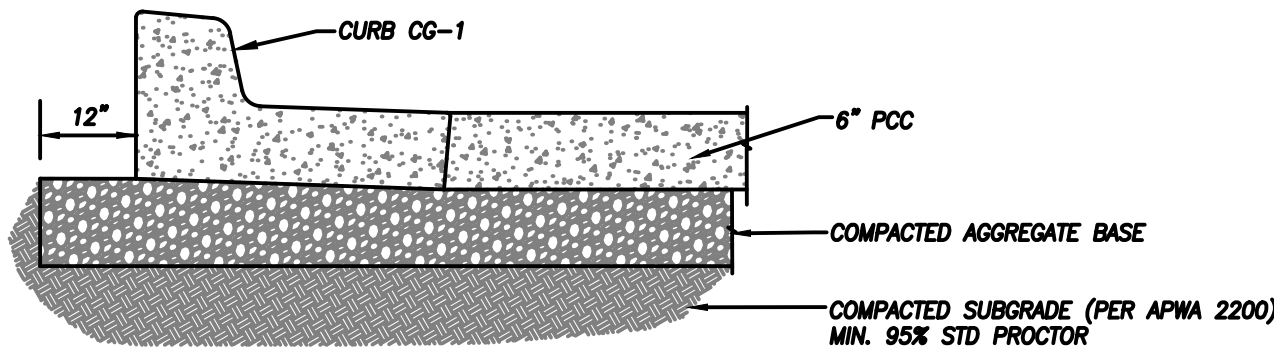
SIDEWALK DETAILS  
NOT TO SCALE



VALLEY GUTTER  
NOT TO SCALE

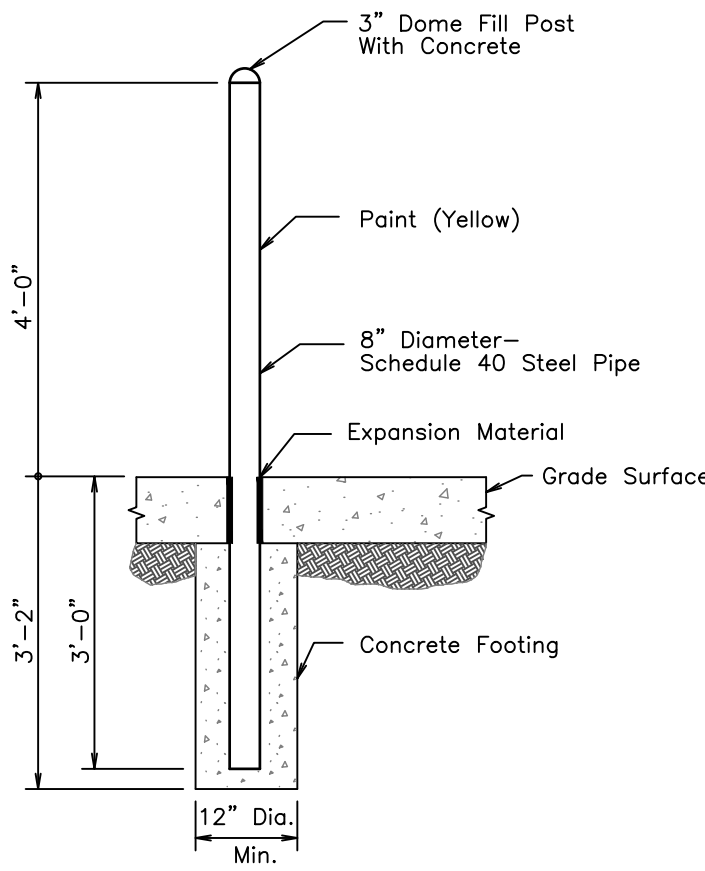


TYPE C-1 CURB  
NOT TO SCALE

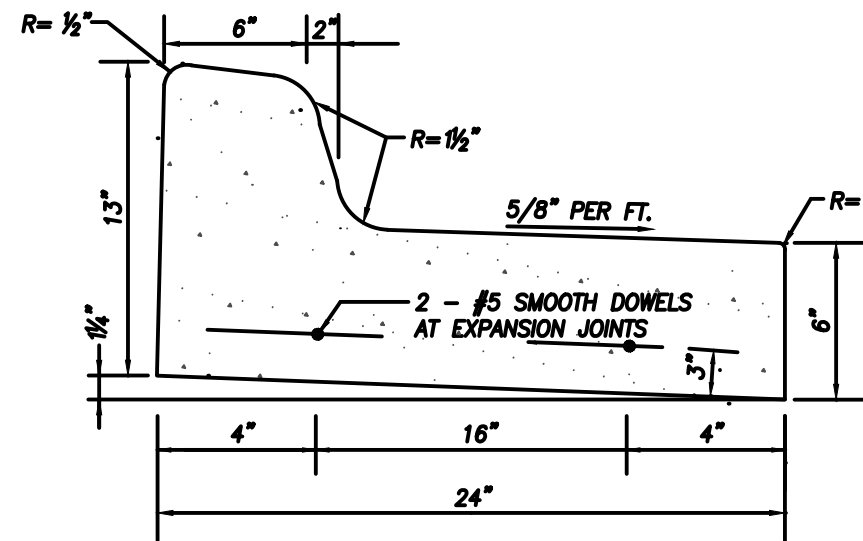


- EXTEND BASE SECTION 12" BEHIND CURB
- SEE PAVEMENT SECTIONS FOR TYPE & THICKNESS

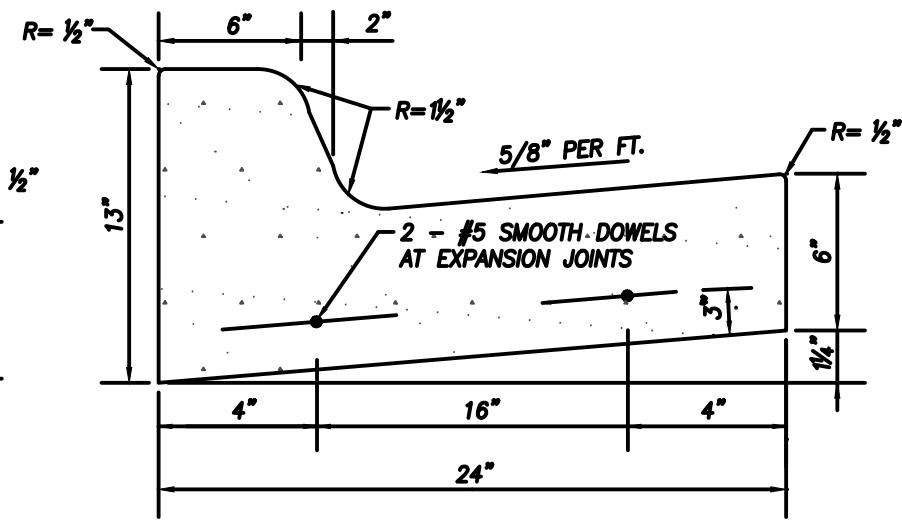
CURB & GUTTER BASE SECTION  
NOT TO SCALE



BOLLARD  
NOT TO SCALE



CG-1 (Modified)

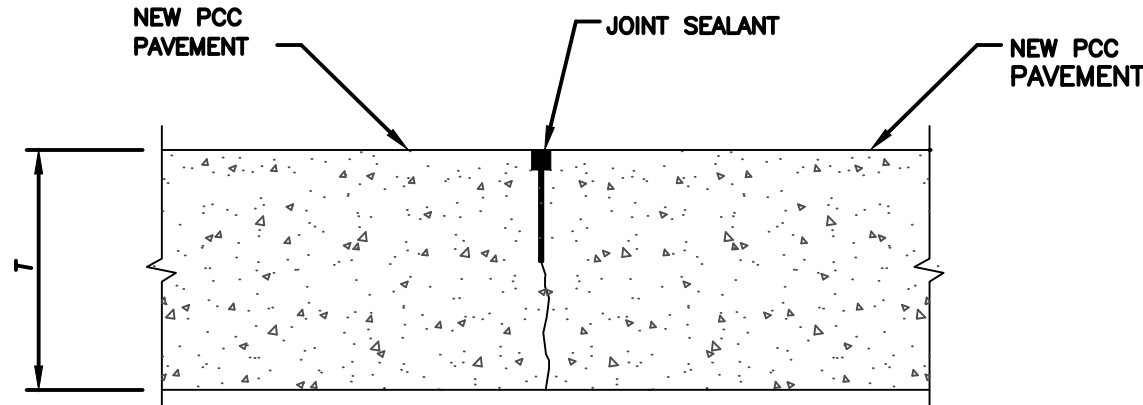


CG-1

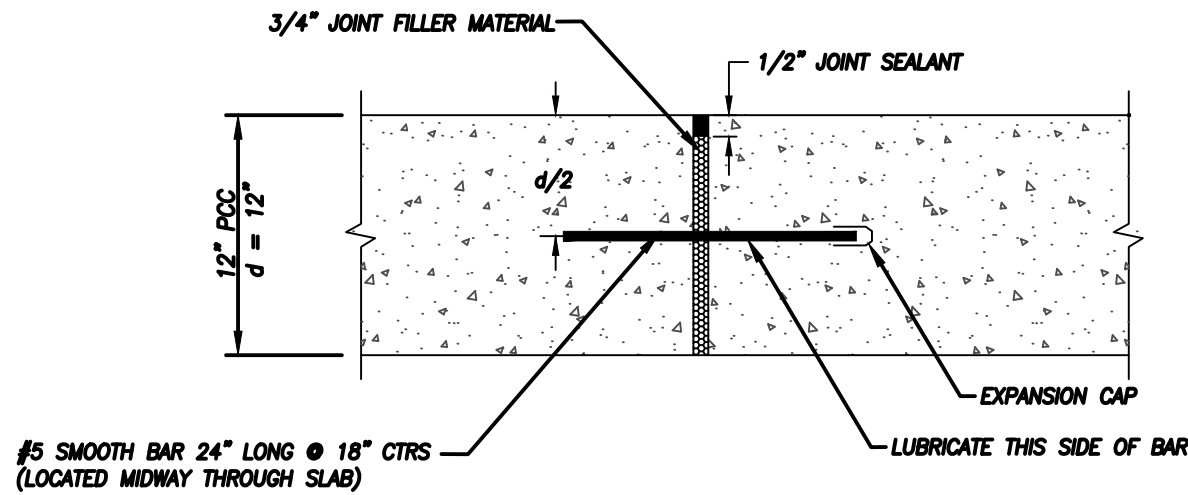
NOTES:

- EXPANSION JOINTS SHALL BE FORMED BY A ONE-HALF (1/2) INCH THICK PREFORMED JOINT FILLER, CUT TO THE CONFIGURATION OF THE FULL SIZE OF THE CURB AND GUTTER SECTION AND BEING SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTING THE CONCRETE AT THESE JOINTS. THE EDGES OF THESE JOINTS SHALL BE ROUNDED WITH AN EDGING TOOL ONE-EIGHTH (1/8) INCH RADIUS.
- EXPANSION JOINTS SHALL BE PLACED WHERE CURB AND GUTTER ABUTS OTHER STRUCTURES AND AT ALL TANGENT POINTS TO CURBS. EXPANSION JOINTS SHALL NOT BE SPACED MORE THAN 50 FEET APART ON STRAIGHT RUNS FOR HAND LAID CURB AND GUTTER AND NOT MORE THAN 100 FEET APART FOR MACHINE LAID CURB AND GUTTER PROVIDED 3/4 INCH THICK JOINT FILLER IS USED. ALL JOINTS SHALL BE FORMED AT RIGHT ANGLES TO THE ALIGNMENT OF THE CURB AND GUTTER.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED BY SAWING THROUGH THE CURB AND GUTTER TO A DEPTH OF NOT LESS THAN ONE AND ONE-FOURTH (1 1/4) INCHES BELOW THE SURFACE AND TO A WIDTH NOT TO EXCEED THREE-EIGHTHS (3/8) INCH OR THEY MAY BE FORMED BY INSERTING A REMOVABLE METAL TEMPLATE IN THE FRESH CONCRETE, OR BY OTHER METHODS APPROVED BY THE ENGINEER. SEALING OF JOINTS IS NOT REQUIRED. CONTRACTION OR CONSTRUCTION JOINTS SHALL BE LOCATED APPROXIMATELY 10 FEET APART.
- EXTEND 4" THICK AGGREGATE BASE MINIMUM 12" BEHIND BACK OF CURB.

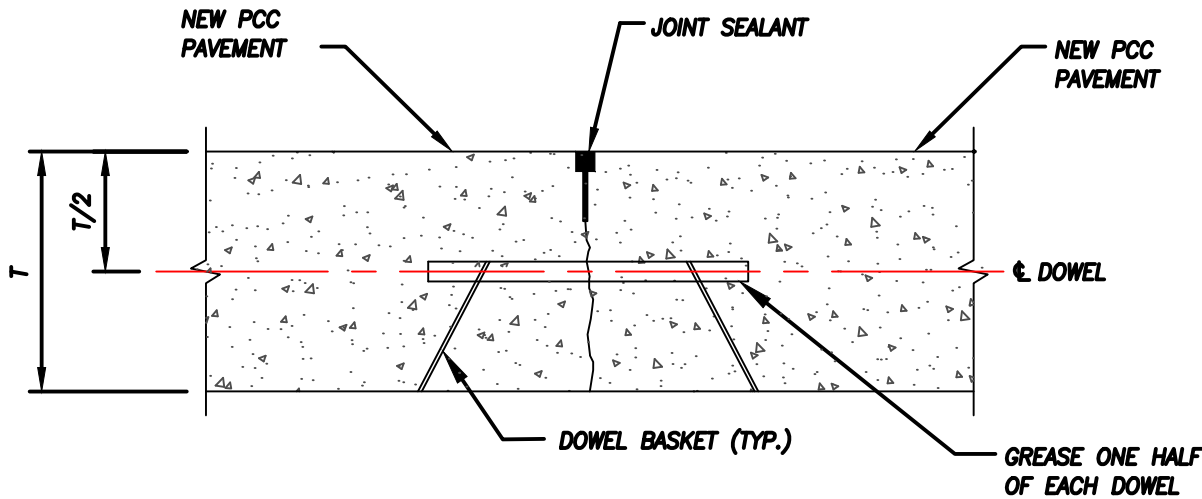
CURB AND GUTTER  
NOT TO SCALE



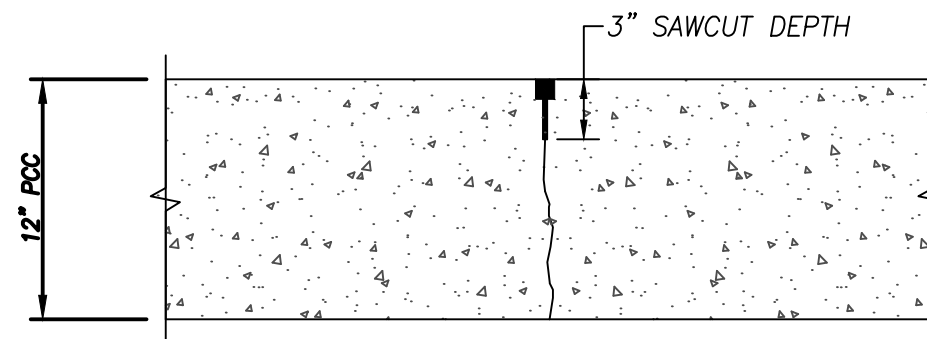
UNDOWELED CONTRACTION JOINT  
NOT TO SCALE



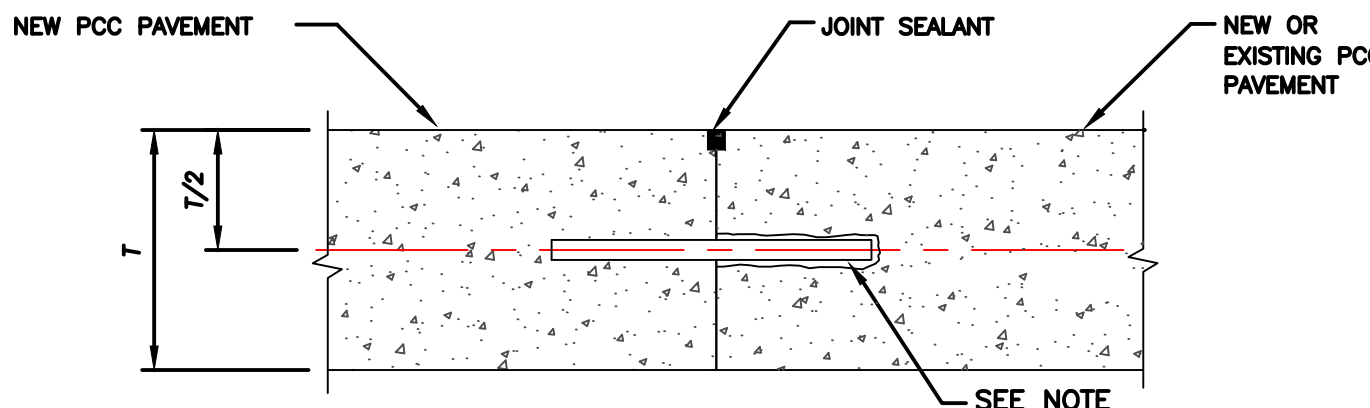
EXPANSION JOINT DETAIL  
NOT TO SCALE



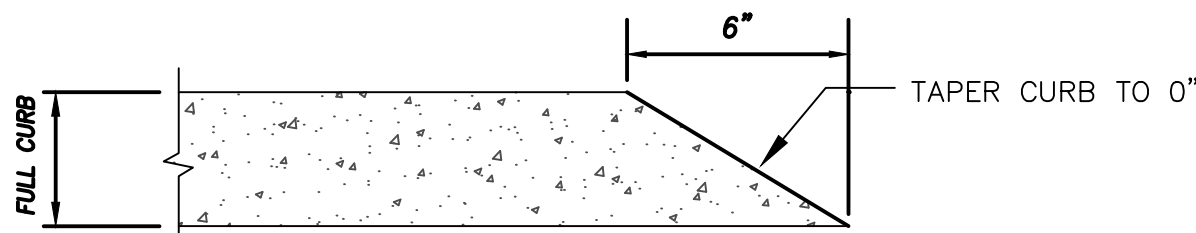
DOWELED CONTRACTION JOINT  
NOT TO SCALE



SAWCUT DEPTH DETAIL  
NOT TO SCALE



DOWELED CONSTRUCTION JOINT  
NOT TO SCALE

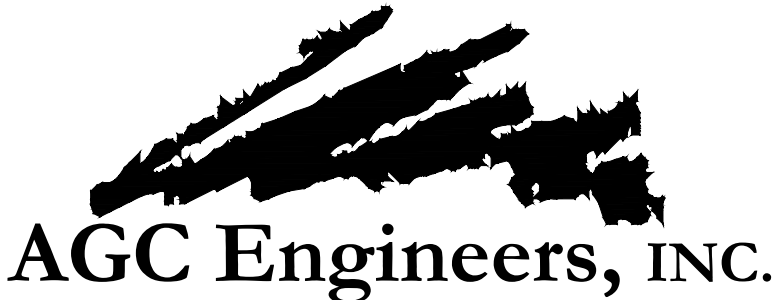


CURB TERMINATION DETAIL  
NOT TO SCALE

NOTE:  
DOWELS SHALL BE CAST INTO NEW PAVEMENT OR PLACED IN HOLES DRILLED PERPENDICULAR TO EDGE SURFACE IN THE EXISTING CONCRETE. FIRMLY SECURED WITH EPOXY GROUT ONCE LEVELED. PRIOR TO PLACING PROPOSED CONCRETE, HALF OF THE EXPOSED DOWELS SHALL BE GREASED.

CONCRETE JOINT DETAILS  
NOT TO SCALE

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RC/ACA	FOR REVIEW	8-26-21



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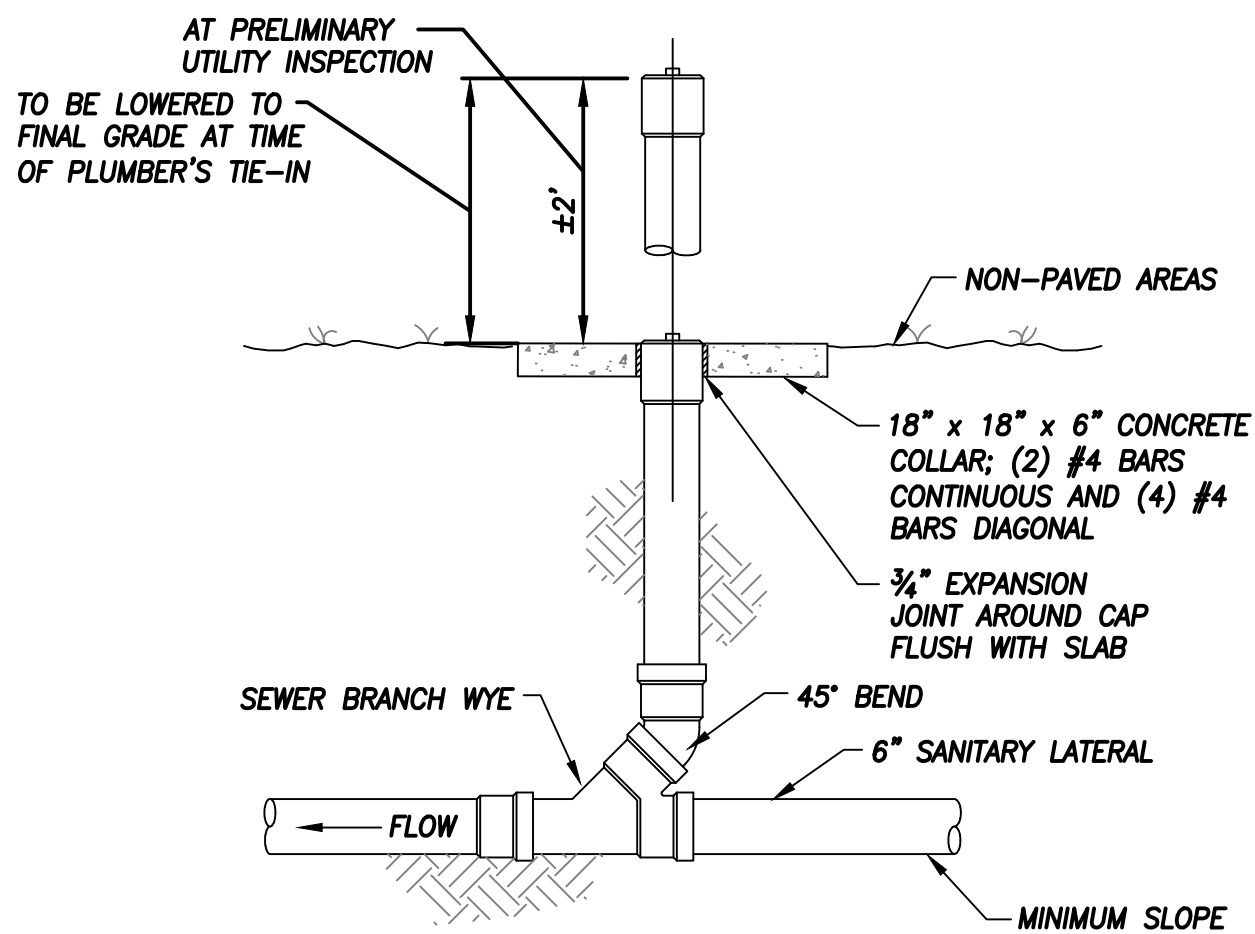
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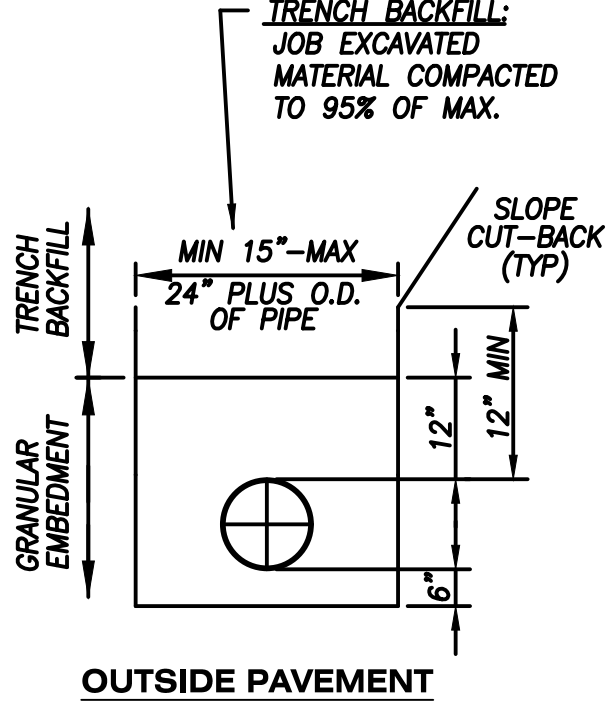
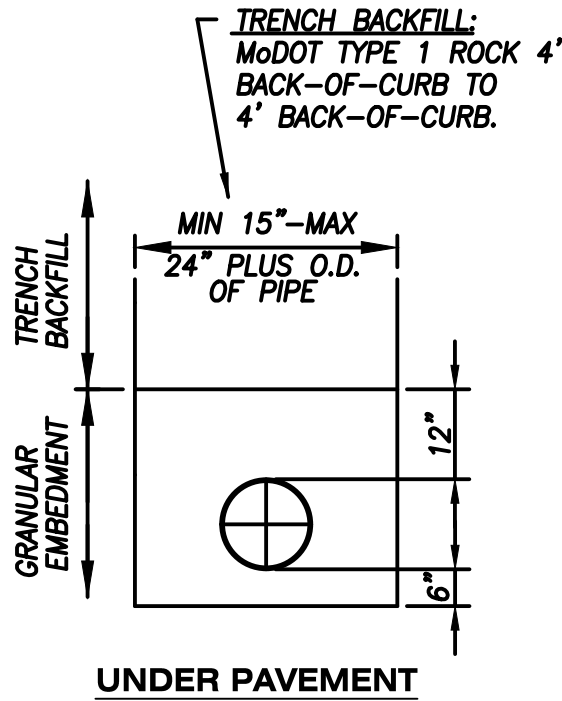
OAKVIEW - LOT 3  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS  
DETAILS



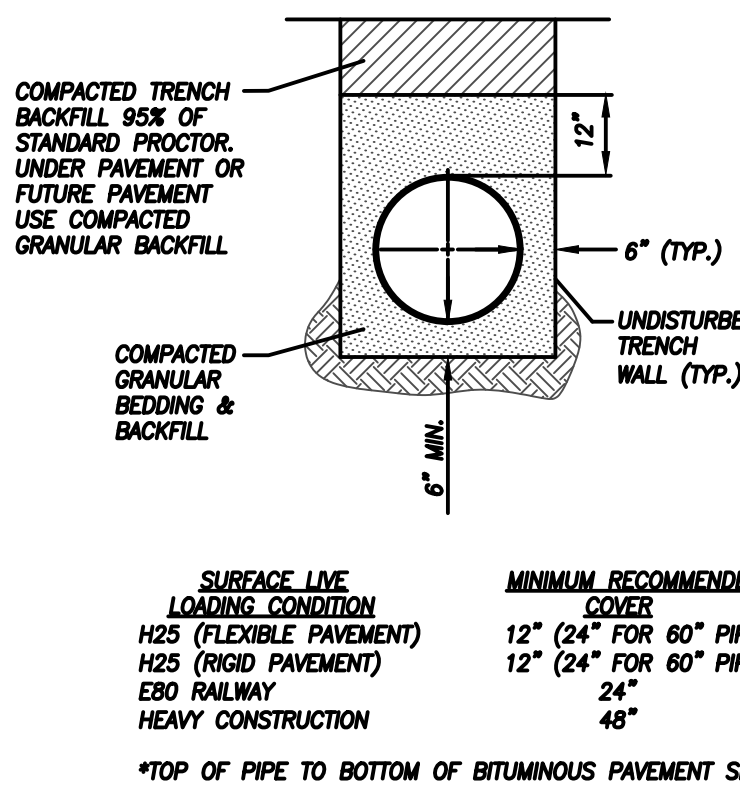


**CLEAN-OUT DETAIL**  
NOT TO SCALE



**EMBEDMENT AND BACKFILL FOR  
SANITARY SEWERS**

NOT TO SCALE



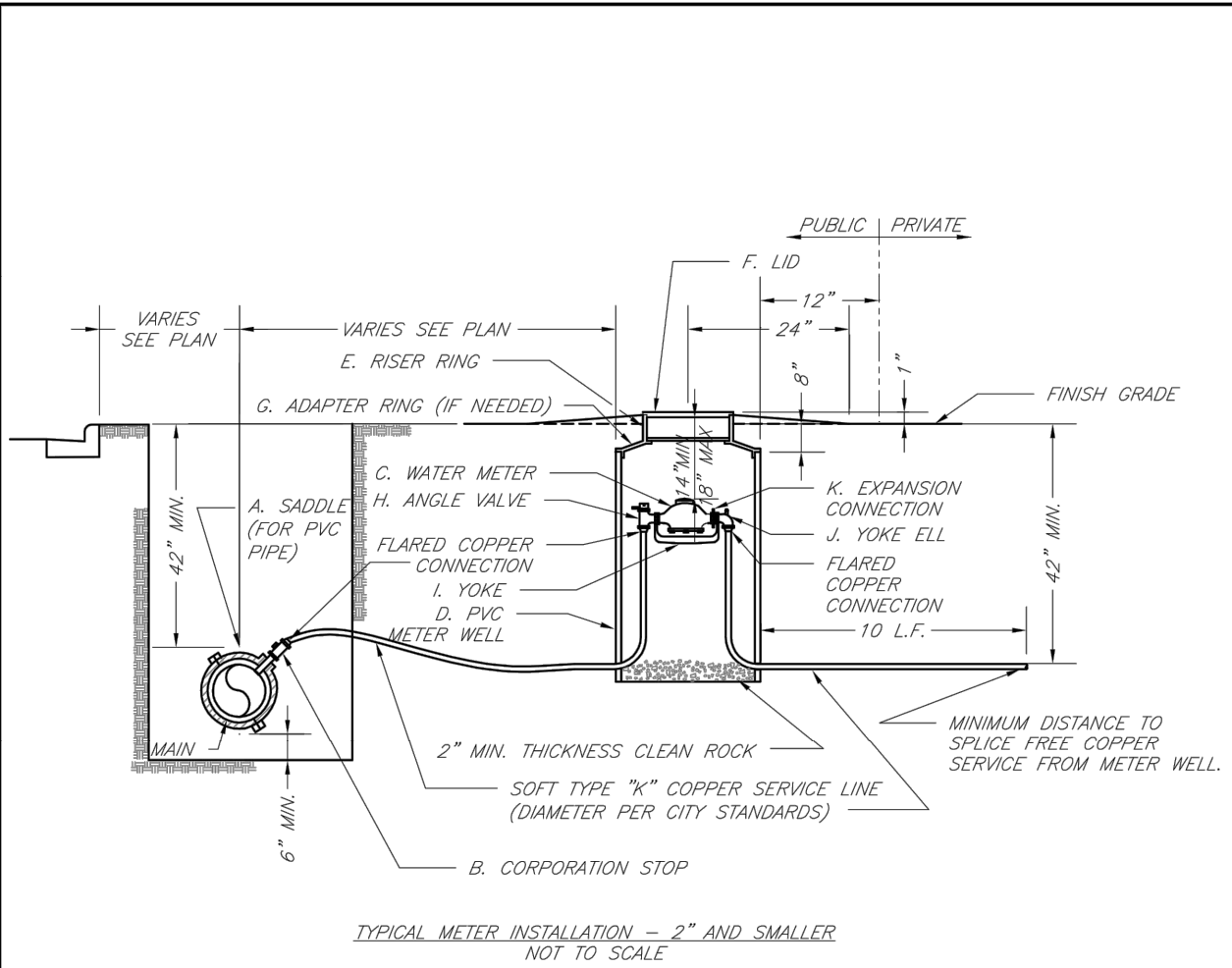
\*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION: AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4"; FOR 4"-24" DIA. HDPE; 6" FOR 30"-60" DIA. HDPE.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL DIA.	MIN. RECOMMENDED TRENCH WIDTH
4	21
6	23
8	25
10	28
12	31
15	34
18	39
24	48
30	66
36	78
42	83
48	89
60	102
5. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE PIPE TO THE GROUND SURFACE.

**HDPE (HIGH DENSITY POLYETHYLENE)  
PIPE INSTALLATION DETAIL**

NOT TO SCALE



**NOTES:**

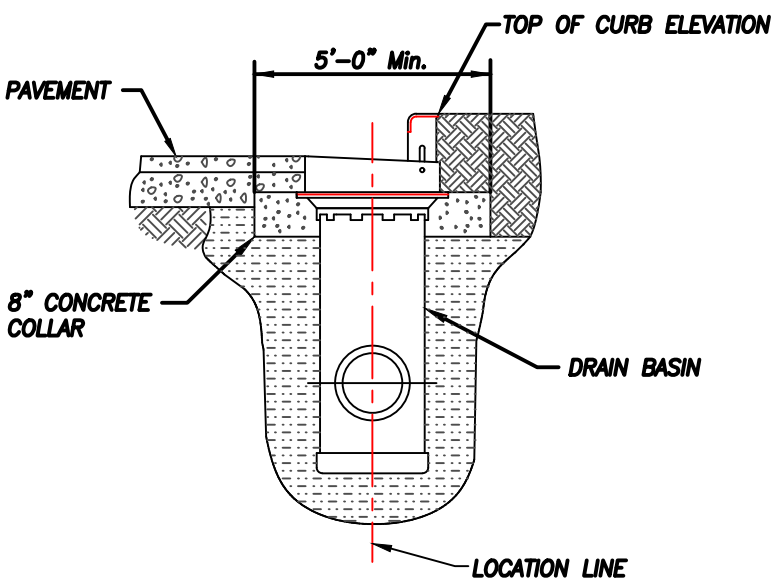
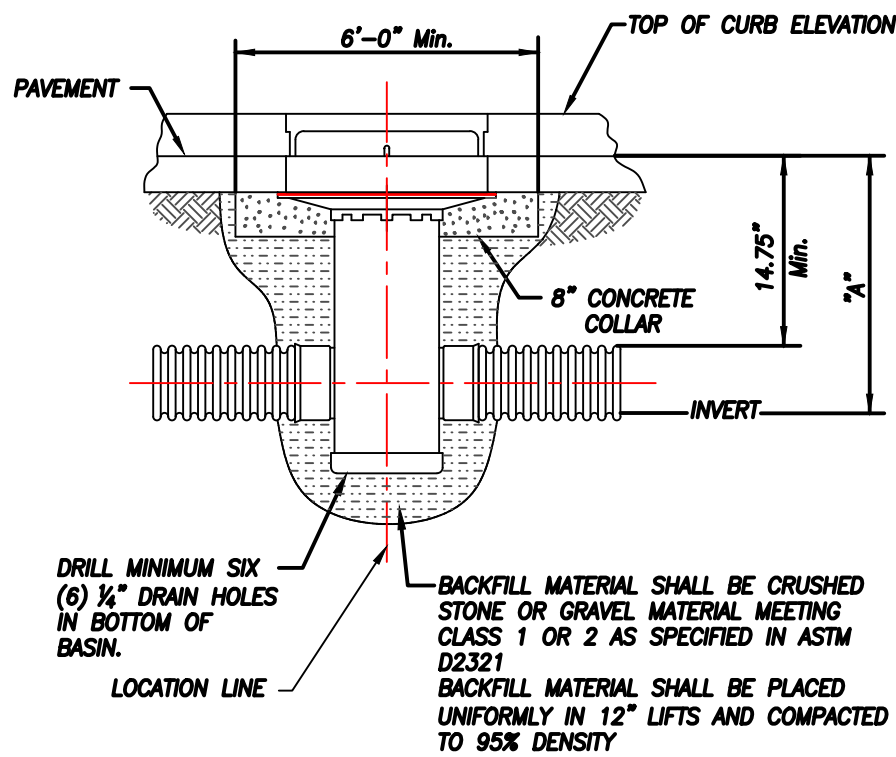
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A-K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 616-968-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"



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SERVICE CONNECTION/METER WELL

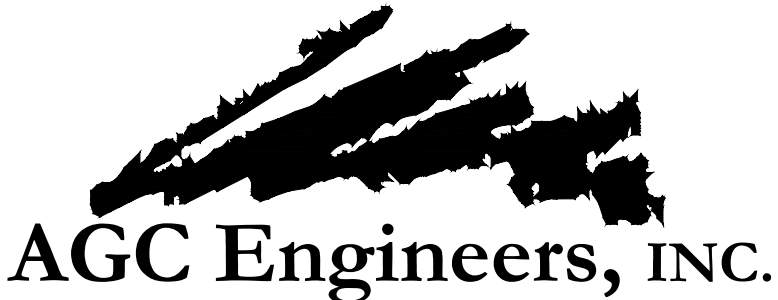
Date: 05/13  
Drawn By: JN  
Checked By: DL  
FILE: WAT-11  
Rev: 1/14  
Rev:



PIPE SIZE	A (ADS N-12 PIPE)
4"	20.00"
6"	22.00"
8"	24.00"
10"	26.00"
12"	29.00"
15"	32.00"
18"	35.00"
24"	42.00"
30"	48.00"

**NYLOPLAST DRAIN BASIN - TYPICAL INSTALLATION**  
NOT TO SCALE

BY	REVISION	DATE
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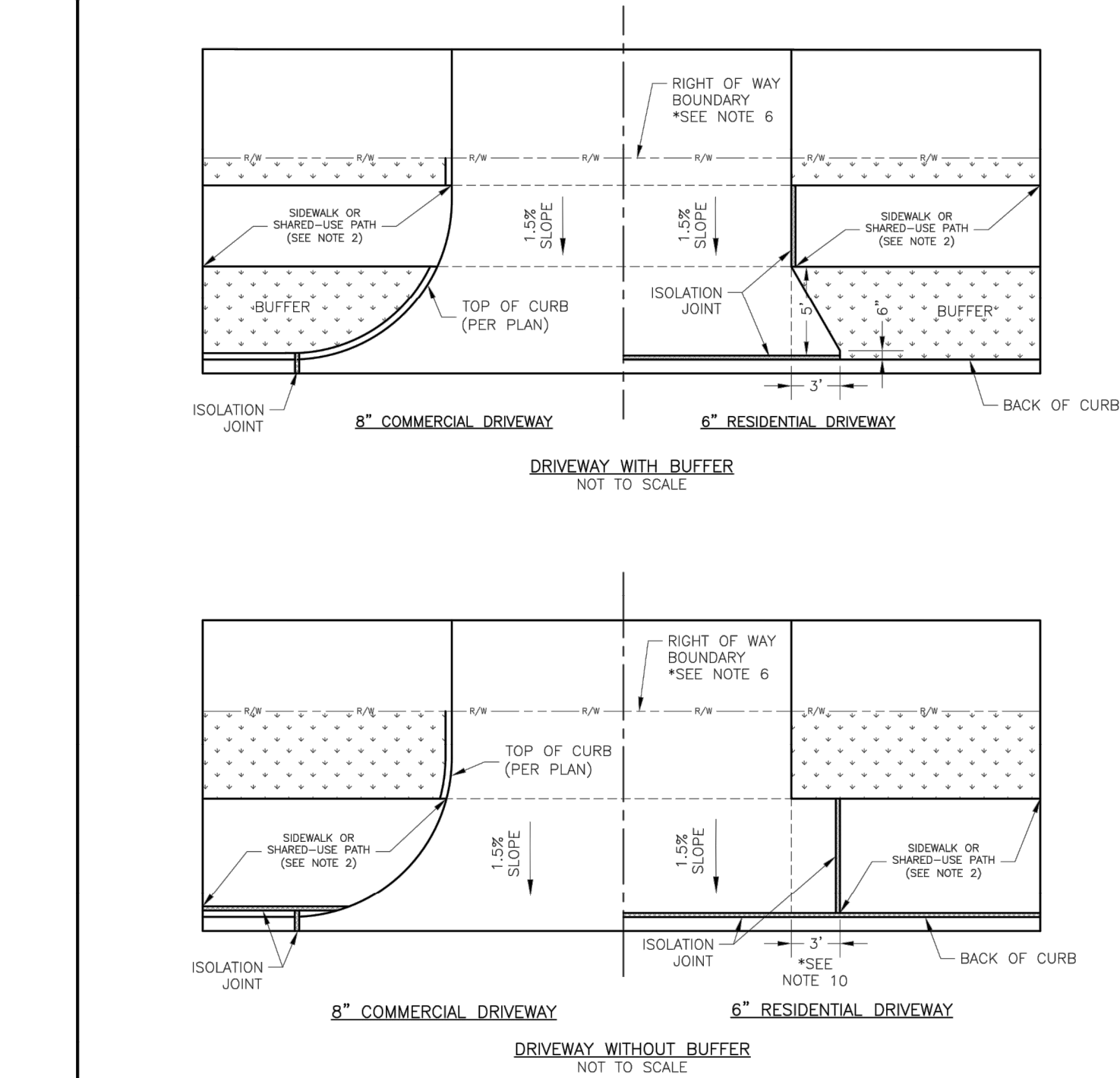


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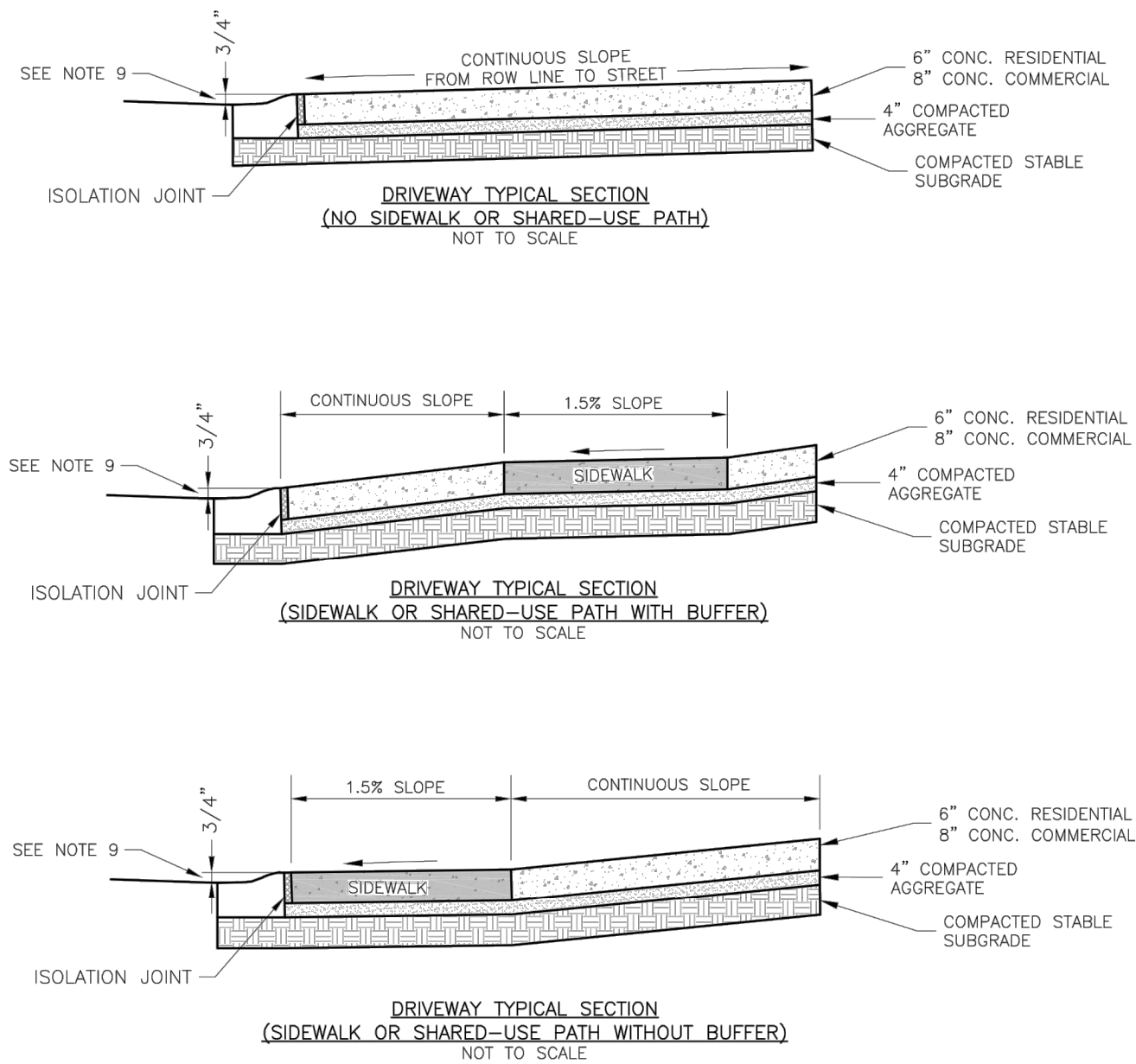


OAKVIEW - LOT 3  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI  
  
SITE DEVELOPMENT PLANS  
DETAILS  
  
13

N:\Land Projects\Site Development - Oakview (Lee's Summit) - Lot 3\Drawings\Drawings-Plans\Final Development Plans\DETAILS.dwg, DETAILS (3, 10/5/2021 11:52:26 PM, ANSI) full bleed D (24.00 x 22.00 inches), 1:1



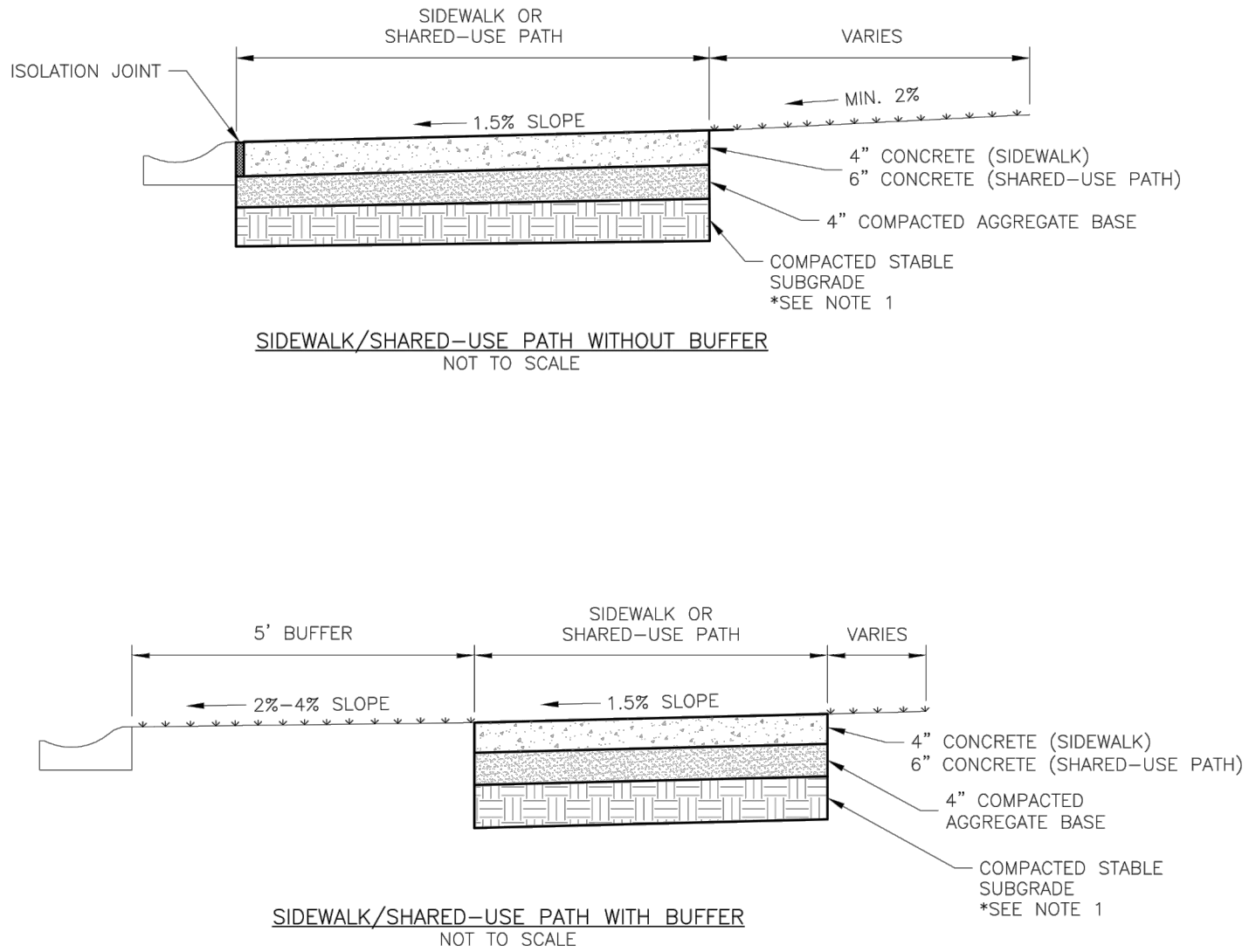
- GENERAL NOTES:**
- SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
  - ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
  - JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
  - KCMBB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
  - COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMBB 4K CONCRETE MIX.
  - RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMBB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEEDS TO BE APPROVED BY CITY INSPECTOR.
  - A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
  - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
  - ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
  - SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
  - THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.



**LEE'S SUMMIT**  
**MISSOURI**

STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO

Drawn By: MJF  
Checked By: DL  
Date: 04/17  
Project:  
GEN-1

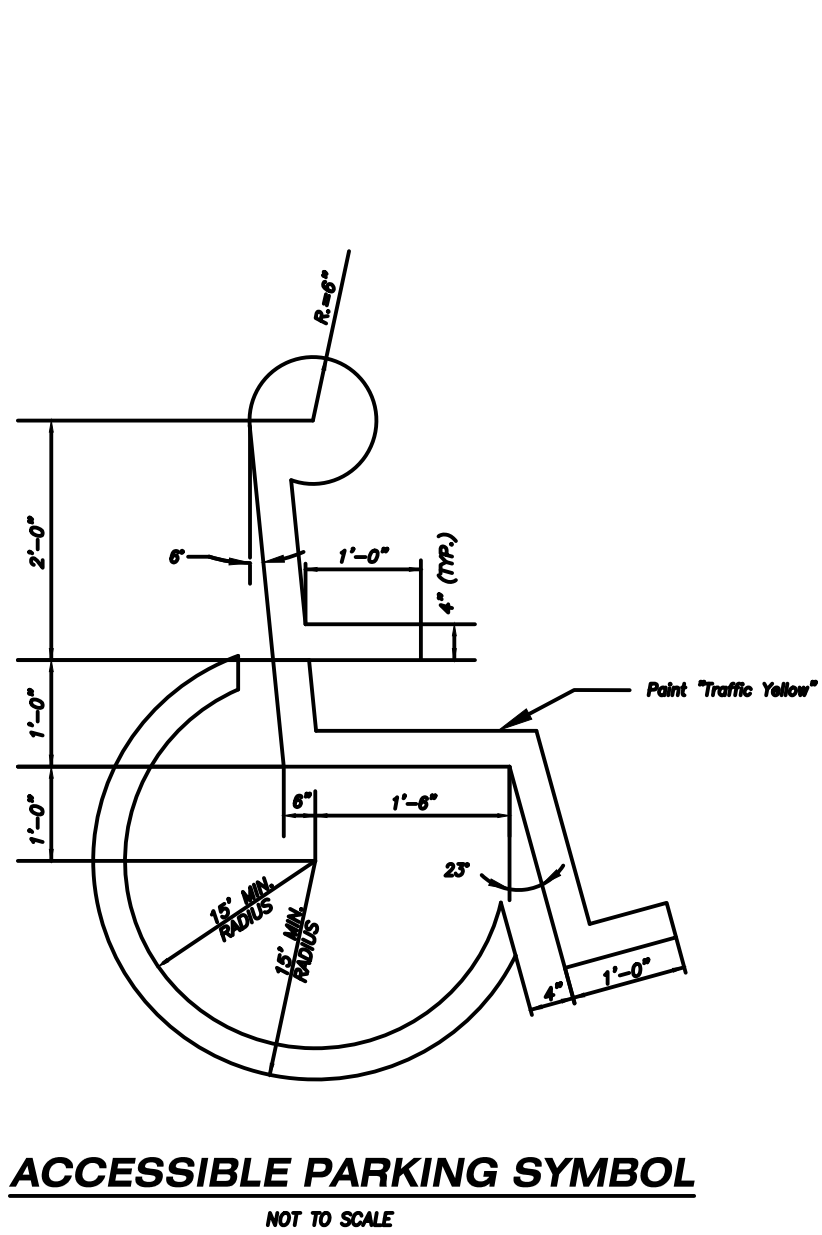


- GENERAL NOTES:**
- SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
  - 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
  - KCMBB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
  - ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
  - AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
  - AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
  - SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
  - SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
  - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

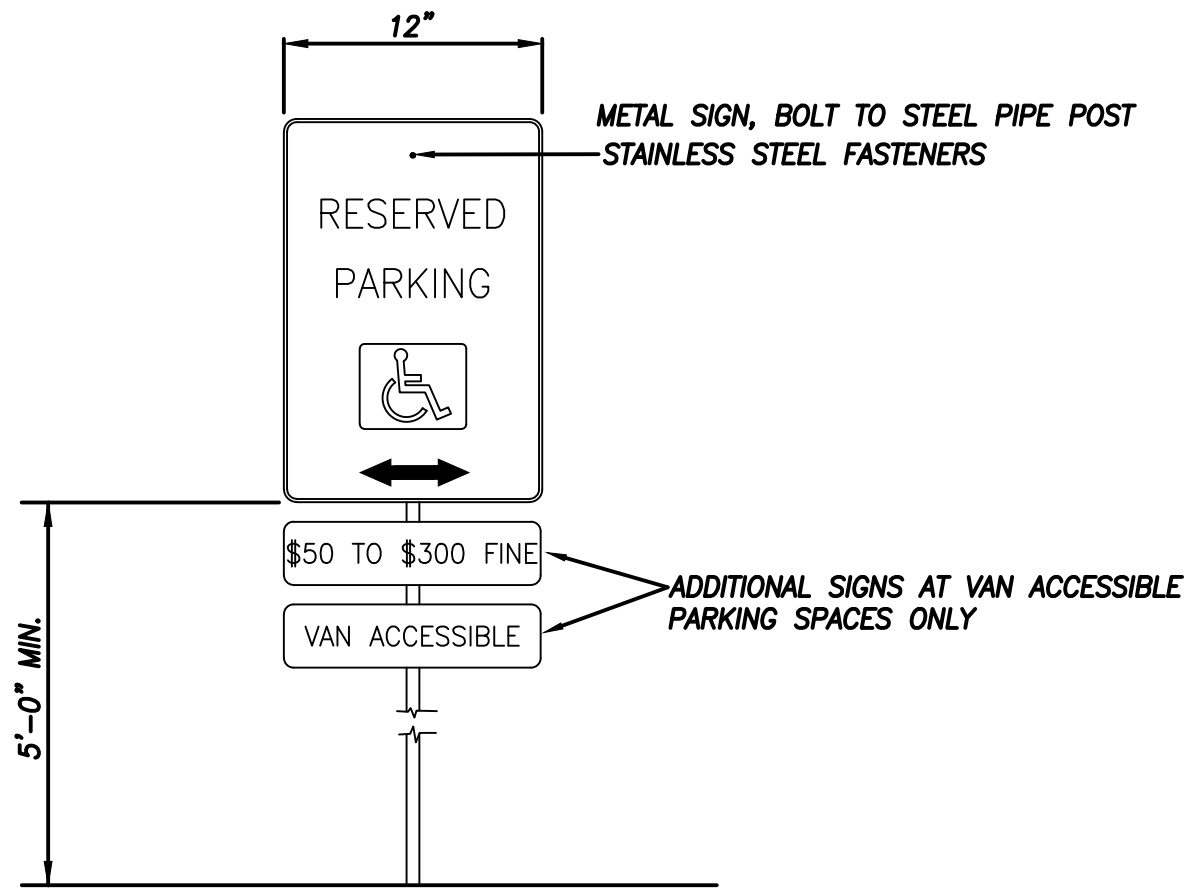


**LEE'S SUMMIT**  
**MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063  
**SIDEWALK/SHARED-USE PATH DETAIL**

Date: 04/17  
Drawn By: MJF  
Checked By: DL  
GEN-2

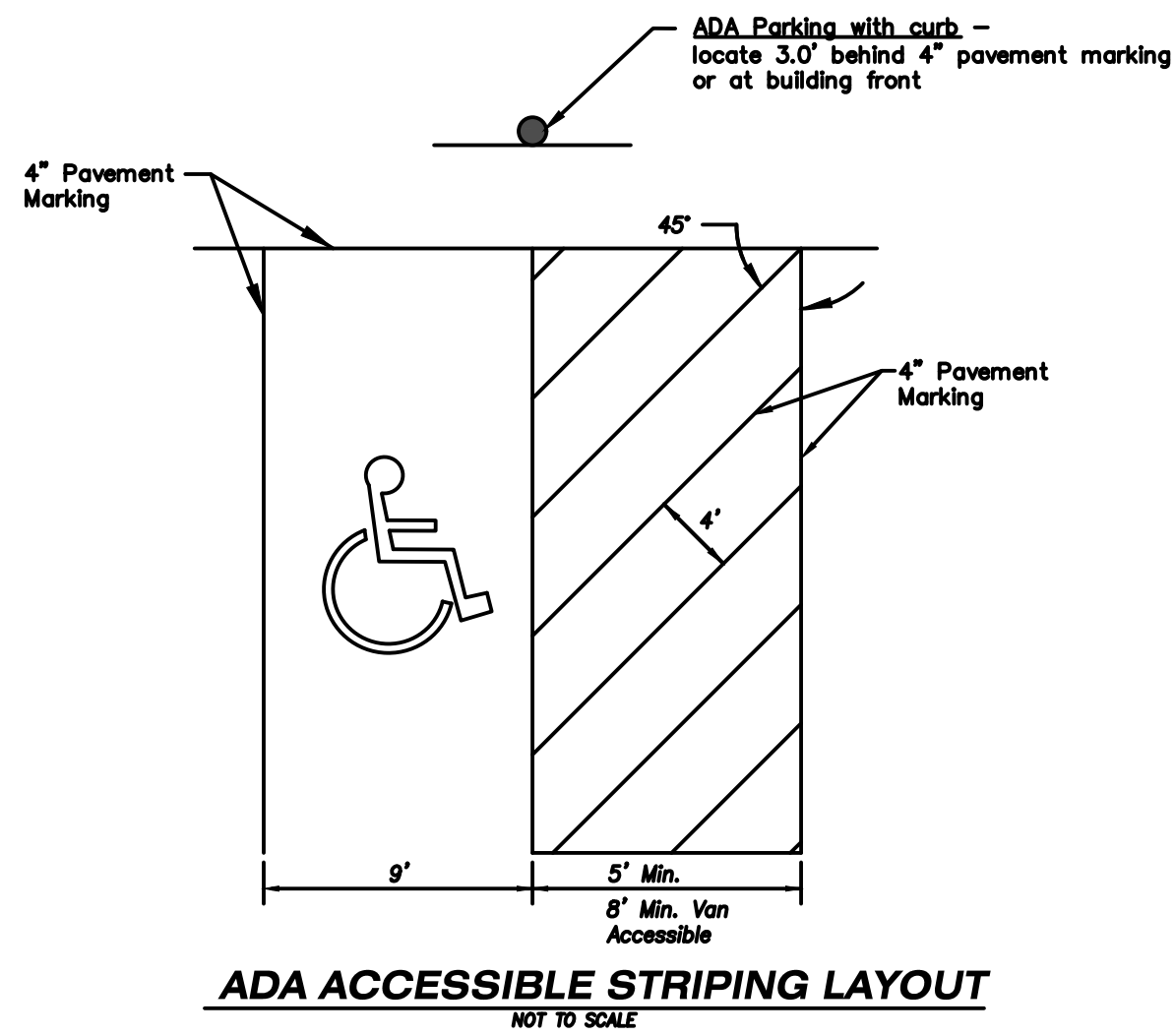


**ACCESSIBLE PARKING SYMBOL**  
NOT TO SCALE



- NOTE:**
- ACCESSIBLE PARKING SIGNS SHALL MEET THE REQUIREMENTS SET FORTH IN THE US DEPARTMENT OF JUSTICE 2010 [ADA] STANDARDS: Titles II and III.
  - PROVIDE SIGN AT THE HEAD OF EACH HANDICAPPED ACCESSIBLE PARKING STALL.

**HANDICAP SIGN**  
NOT TO SCALE

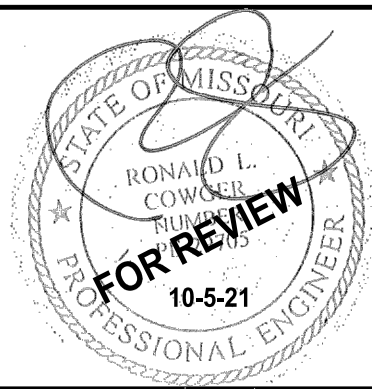


**ADA ACCESSIBLE STRIPING LAYOUT**  
NOT TO SCALE

BY	REVISION	DATE
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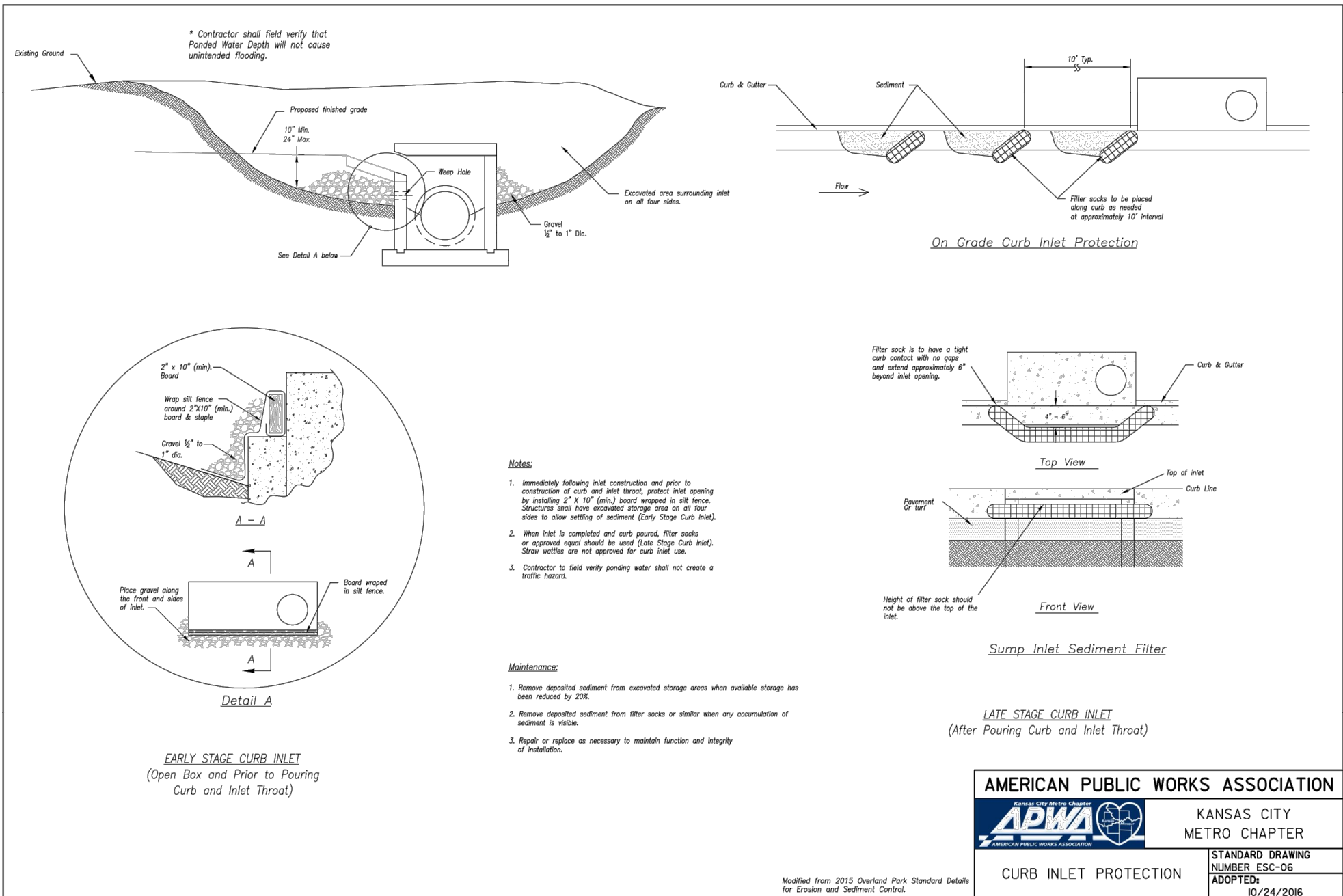
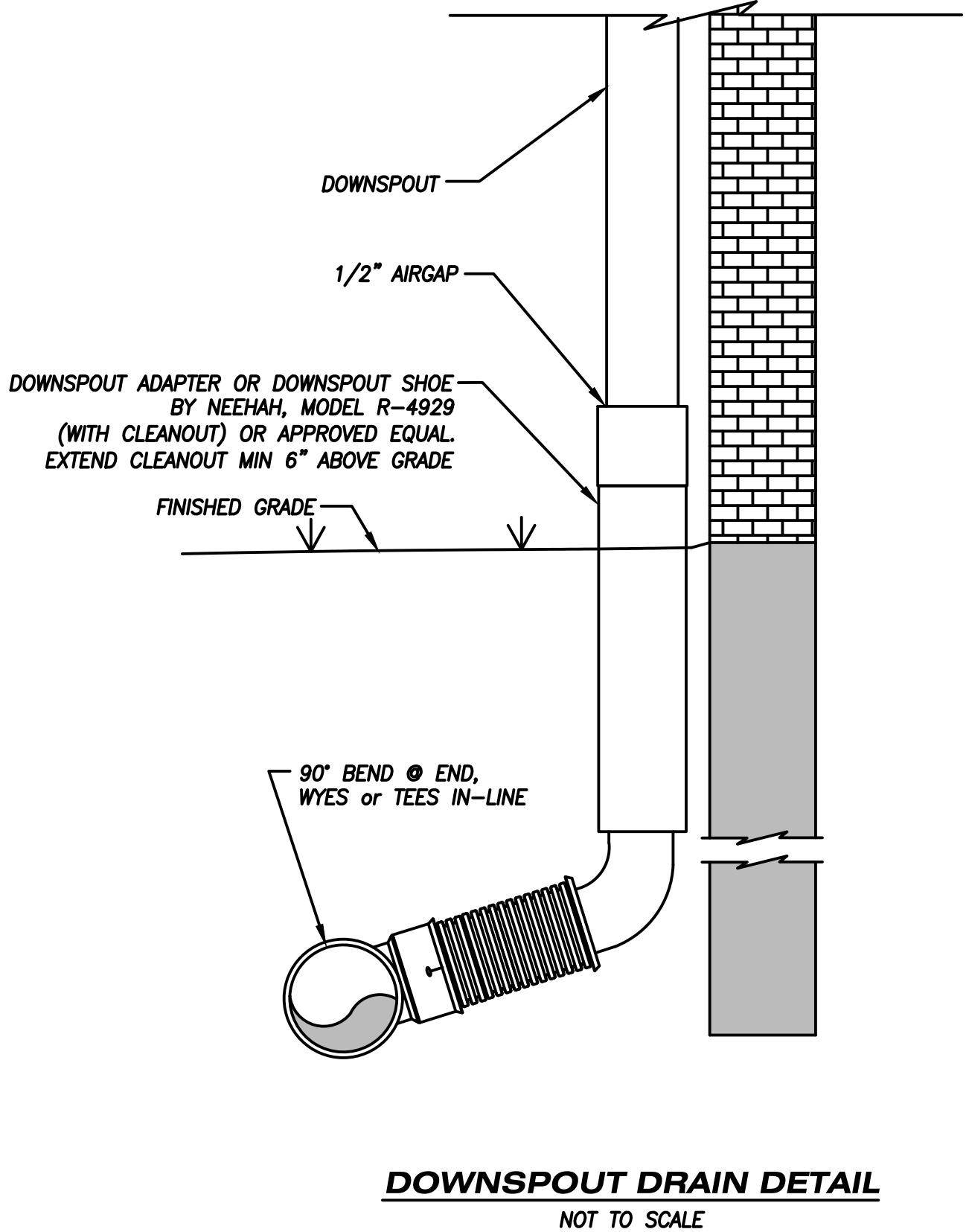
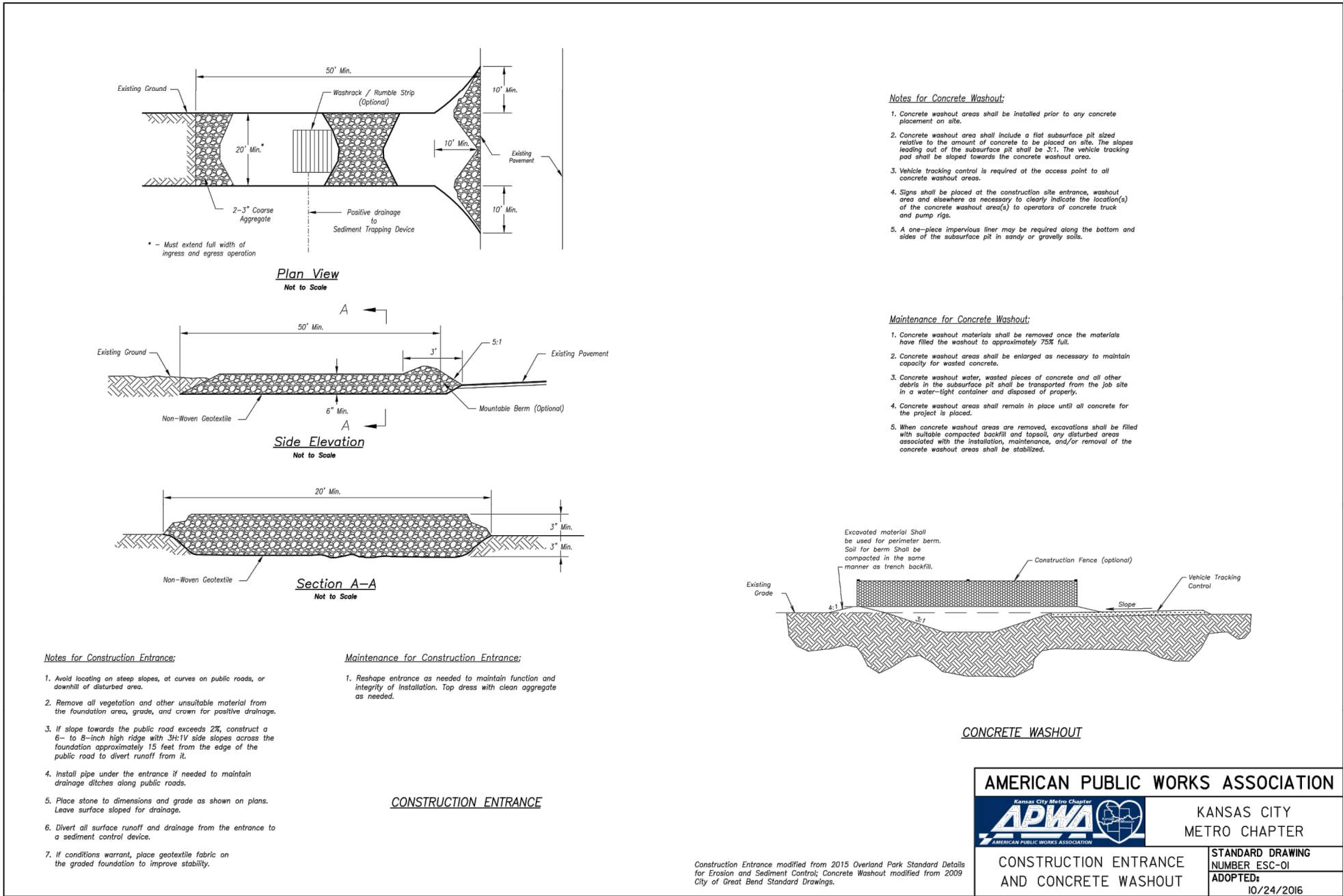
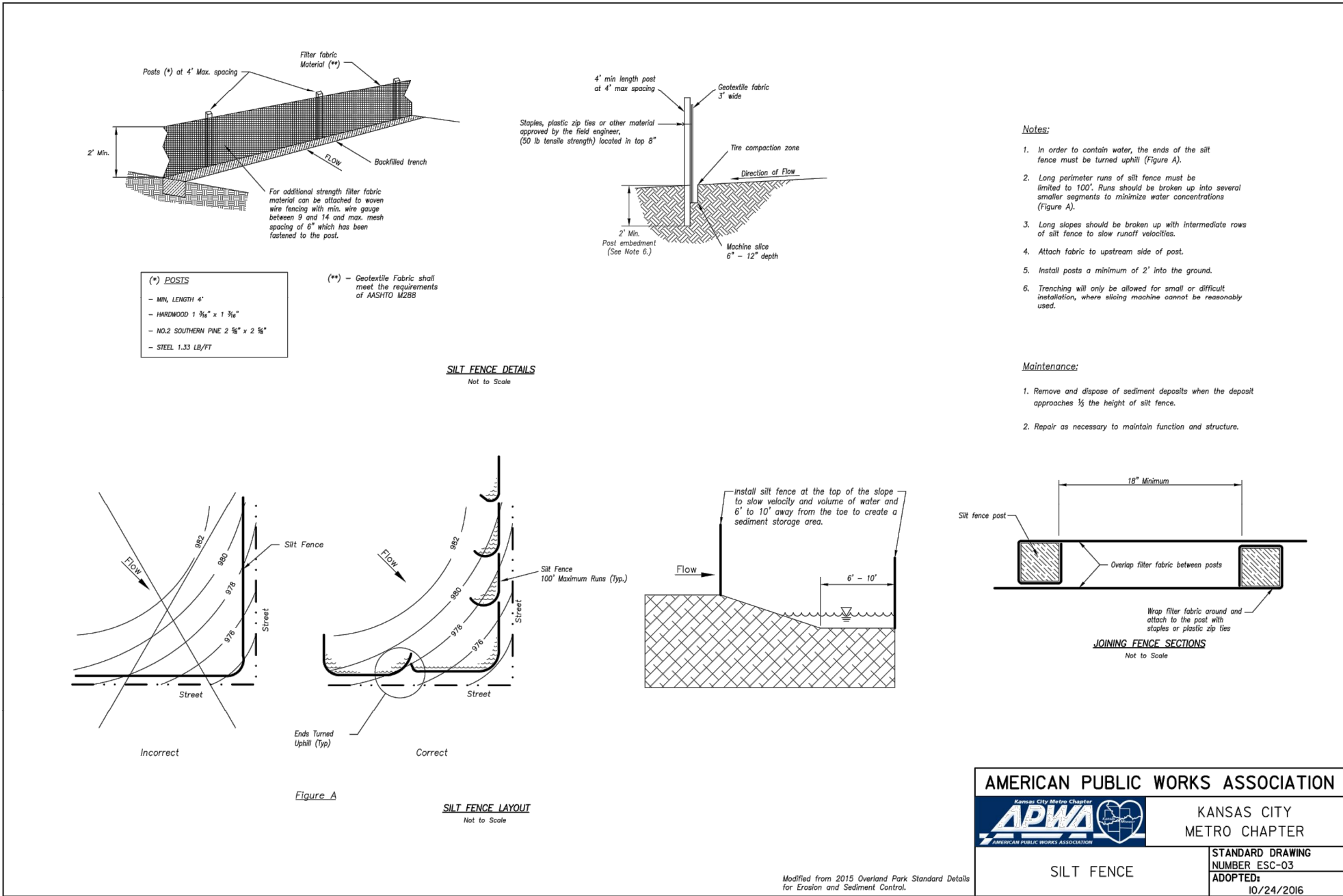
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DETAILS  
  
14



N:\Land Projects\Star Development - Oakview (Lee's Summit) - 1 of 3 Drawings\Drawings\Plan\Development\Plan\DETAILS.dwg, DETAILS (4), 10/5/2021 1:15:32 PM, ARCH 18 based D (26.00 x 24.00 inches), 1:1



BY	REVISION	DATE
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RC/ACA	FOR REVIEW	8-26-21

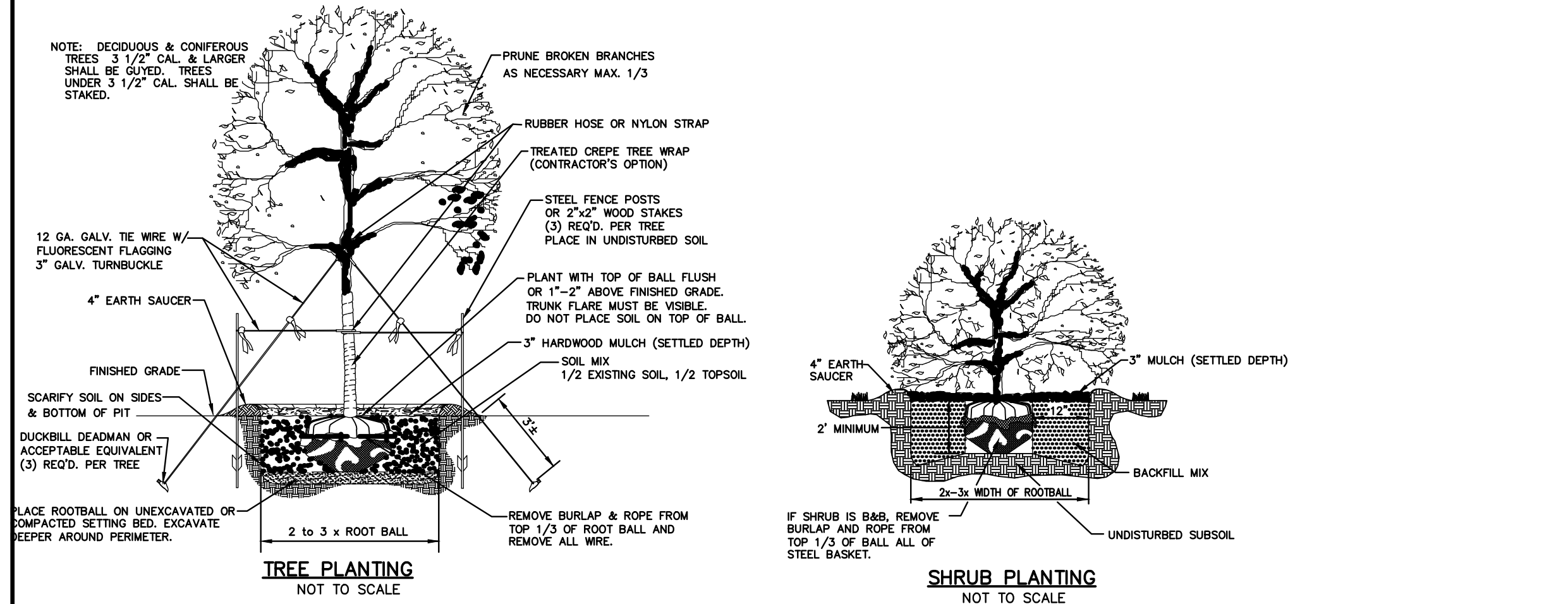
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OAKVIEW - LOT 3  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI  
SITE DEVELOPMENT PLANS  
DETAILS





PLANT SCHEDULE				
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE/REMARKS
TREES				
CSM	3	ACER SACHARUM 'AUTUMN SPLENDOR'	CADDO SUGAR MAPLE	3" CAL. B&B
RO	2	QUERCUS RUBRA	RED OAK	3" CAL. B&B
SSC	5	MALUS 'SPRING SNOW'	SPRING SNOW CRAB	2" CAL. B&B
RB	5	CERCIS CANADENSIS 'OKLAHOMA'	OKLAHOMA RED BUD	2" CAL. B&B
PJ	16	JUNIPEROUS CHINENSIS 'PERFECTA'	PERFECTA JUNIPER	6' HT. B&B
SHRUBS/GRASSES/GROUND COVER				
SGJ	21	JUNIPEROUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	5 GAL
DY	24	TAXUS x MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	5 GAL

**IRRIGATION PERFORMANCE SPECIFICATION:**

THE FOLLOWING CRITERIA SHALL BE CONSIDERED MINIMUM STANDARDS FOR DESIGN AND INSTALLATION OF LANDSCAPE IRRIGATION SYSTEM:

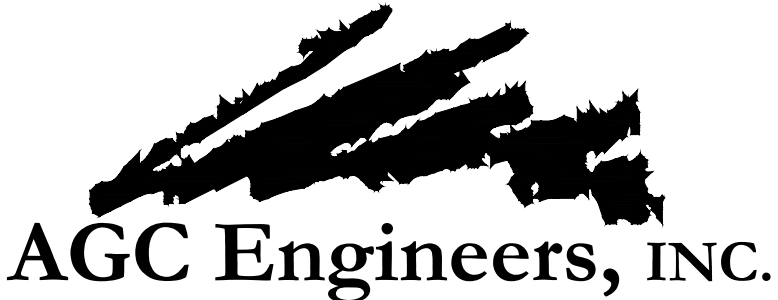
1. GENERATION OF IRRIGATION SYSTEM TO INCLUDE DRY PIRKING OF SHRUB BEDS ADJACENT TO BUILDINGS, SPRINK HEADS IN THE PIRKING ISLANDS, AND ROTORS AROUND THE PERIMETER OF THE PARKING LOTS. HEADS SHALL THROW AWAY FROM BUILDING AND AVOID SPRAYING OVER SIDEWALKS.
2. IRRIGATION SYSTEM SHALL CONFORM TO ALL INDUSTRY STANDARDS AND ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING DESIGN AND INSTALLATION.
3. WATER MAIN SIZE, LOCATION, PRESSURE AND FLOW SHALL BE FIELD VERIFIED PRIOR TO SYSTEM DESIGN AND INSTALLATION.
4. ALL MATERIALS SHALL BE FROM NEW STOCK FREE OF DEFECTS AND CARRY A MINIMUM ONE YEAR WARRANTY FROM THE DATE OF SUBSTANTIAL COMPLETION.
5. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN SUCH A WAY THAT ALL SYSTEM COMPONENTS OPERATE WITHIN THE GUIDELINES ESTABLISHED BY THE MANUFACTURER.
6. LAWN AREA AND SHRUB BEDS SHALL BE ON SEPARATE CIRCUITS.
7. PROVIDE WATER TAP, METER SET, METER VAULT AND ALL OTHER OPERATIONS NECESSARY TO PROVIDE WATER FOR IRRIGATION SHALL CONFORM TO LOCAL WATER GOVERNING AUTHORITY GUIDELINES AND STANDARDS.
8. BACKFLOW PREVENTION SHALL BE PROVIDED IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
9. IRRIGATION CONTROLLER TO BE LOCATED IN UTILITY ROOM INSIDE BUILDING, AS IDENTIFIED BY OWNER.
10. IRRIGATION CONTROLLER STATIONS SHALL BE LABELED TO CORRESPOND WITH THE CIRCUIT IT CONTROLS.
11. CONTRACTOR SHALL PROVIDE TO THE OWNER WRITTEN OPERATION INFORMATION FOR ALL SYSTEM COMPONENTS.
12. CONTRACTOR SHALL PROVIDE TO THE OWNER ALL KEYS, ACCESS TOOLS, WRENCHES AND ADJUSTING TOOLS NECESSARY TO GAIN ACCESS, ADJUST AND CONTROL THE SYSTEM.
13. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
14. AN ANTI-FRUIT RAIN SHUT-OFF OR MOISTURE DEVICE SHALL BE INSTALLED.
15. INSTALL SCHEDULE 40 PVC SLEEVES UNDER ALL CURBS, PAVING AND SIDEWALKS. SLEEVES TO BE TWICE THE SIZE OF THE LINE IT HOUSES.
16. INSTALL MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN TO ALLOW GRAVITY DRAINING OF MAIN DURING WINTER MONTHS. PROVIDE QUICK COUPLERS AT MULTIPLE LOCATIONS TO ALLOW FOR EASY "BLOWING OUT" OF MAIN.
17. ZONES OR NOZZLES SHALL BE DESIGNED WITH MATCHED PRECIPITATION RATES.
18. MINIMUM LATERAL DEPTH IS 15" AND MAIN DEPTH IS 18".
19. SUBMIT DESIGN DRAWING WITH BID TO ALLOW OWNER TO EVALUATE SYSTEM. INCLUDE CUT SHEETS OF ALL COMPONENTS AND ZONE TABLE ILLUSTRATING FLOWS AND ANTICIPATED PRESSURE AT FURTHEST HEAD.
20. AN "AS-BUILT" SCALED DRAWING SHALL BE PROVIDED TO THE OWNER BY THE CONTRACTOR. IT SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
  - AS CONSTRUCTED LOCATION OF ALL COMPONENTS
  - COMPONENT NAME, MANUFACTURER, MODEL INFORMATION, SIZE AND QUANTITY
  - PIPE SIZE AND QUANTITY
  - INDICATION OF SPRINKLER HEAD SPRAY PATTERN
  - CIRCUIT IDENTIFICATION SYSTEM
  - DETAILED METHOD OF WINTERIZING SYSTEM

SUBMIT AS-BUILT DRAWING IN FULL SIZE DRAWING FORM AS WELL AS PDF ELECTRONIC FORMAT. (SCANNING FULL SIZE COPY OF PLAN IS ACCEPTABLE IF IT CAN BE PRINTED TO SCALE)

1. LOCATE ALL UTILITIES BEFORE LANDSCAPE CONSTRUCTION BEGINS.
2. NOTIFY OWNER REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES.
3. ALL EXTERIOR GROUND WITHIN THE LIMITS OF THE CONTRACT, EXCEPT FOR SURFACES OCCUPIED BY BUILDINGS, STRUCTURES, PAVING, AND AS DIRECTED ON THE DRAWINGS AS UNDISTURBED, SHALL BE FILLED WITH SIX INCHES (6") OF TOPSOIL.
4. ALL DISTURBED AREAS NOT DESIGNATED FOR OTHER PLANTING SHALL BE SODDED. SOD SHALL CONSIST OF 90% TURF TYPE TALL FESCUE 10% BLUEGRASS.
5. WEED MAT SHALL BE USED UNDER ALL PLANTING AREAS NOT TO BE SODDED OR AS DIRECTED ON THE DRAWINGS. THE MAT SHALL BE COVERED WITH MULCH AND SECURED IN-PLACE BY A SOIL ANCHOR.
6. QUANTITIES INDICATED IN PLANT LIST ARE FOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PLANT QUANTITIES AS ILLUSTRATED ON THE PLAN.
7. SHREDDED HARDWOOD MULCH SHALL BE USED AS THREE INCH (3") TOP DRESSING IN ALL PLANT BEDS AND AROUND ALL TREES. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF SAUCER OR LANDSCAPE ISLAND (SEE PLANTING DETAILS).
8. PROVIDE STEEL EDGING AROUND ALL SHRUB AND GROUND COVER BEDS. STEEL EDGING SHALL BE 1/8" x 4" WITH CLIPS AND REBAR STAKES FIVE FEET (5') ON CENTER.
9. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME-RELEASE FERTILIZER (3-4 SLOW-RELEASE TABLETS/PELLETS).
10. IF LEANING OCCURS WITHIN ONE YEAR, TREES SHALL BE RE-STAKED (SEE PLANTING DETAILS).
11. CONTRACTOR SHALL STAKE ALL PLANT MATERIALS PRIOR TO INSTALLATION FOR THE PURPOSE OF DETERMINING CONFLICTS WITH ROCK, UTILITIES, ETC. NO PLANTS CAN BE PLANTED DIRECTLY ON ROCK OR UTILITIES. NOTIFY ARCHITECT/ENGINEER/OWNER AT ONCE IF ANY CONFLICTS OCCUR. CONTRACTOR WILL BE REQUIRED TO ADJUST PLANT LOCATIONS AT NO ADDITIONAL COST.
12. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL SOD UNTIL ROOTS HAVE KNOTTED INTO SOIL AND OWNER HAS OCCUPIED THE BUILDING.
13. PROVIDE "GATOR" BAGS ON ALL TREES. REFILL AS NECESSARY UNTIL OWNER OCCUPIES THE BUILDING.
14. PROVIDE ROLLED EROSION CONTROL MAT, NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL OVER ALL NATIVE GRASS SEEDBED AREAS.
15. 12" GRAVEL MOW STRIP - PROVIDE AND INSTALL: 3/4" x 5" STEEL EDGING (SURE-LOC OR EQ.). ANCHOR IN PLACE WITH STAKES PER MANUFACTURER. PROVIDE AND INSTALL HEAVY DUTY WEED BARRIER FABRIC UNDER GRAVEL. PROVIDE AND INSTALL 3" DEPTH OF 1"-2" MULTI-COLORED WASHED RIVER GRAVEL, SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL.

	ORDINANCE REQUIREMENT	REQUIRED FOR THIS SITE	PROPOSED (EXISTING AND NEW LANDSCAPE)
8.720.A.1 Street Frontage Trees (NW Douglas)	1 tree per 30 feet of street frontage	216 ft. of street frontage/30= 8 trees required	8 trees
8.720.A.2 Street Frontage Green Strip (NW Douglas)	20 feet	20 feet	20 feet
8.720.A.3 Street Frontage Shrubs (NW Douglas)	1 shrub per 20 feet of street frontage	216 ft. of street frontage/20= 11 shrubs required	11 shrubs
8.790.B.1 Open Yard Shrubs	2 shrubs per 5000 sq. ft. of total lot area excluding building footprint.	17,235 sq. ft./5000 x 2=6.9 shrubs.	7 Upright Junipers
8.790.B.2 Open Groundcover	Open area not covered with other materials shall be covered with sod.		Sod
8.790.B.3 Open Yard Trees	1 tree per 5000 sq. ft. of total lot area excluding building and parking.	18,736 sq. ft./5000=3.7 trees.	4
8.810.A Parking Lot Landscape Islands	5% of entire parking area (spaces, aisles & drives); 1 island at end of every parking bay, min. 9' wide	17,235 sq.ft. of parking area x .05 = 862 sq.ft. of landscape parking lot islands required	1,052 sq.ft.
8.820 Screening of Parking Lot, NW Douglas	12 shrubs per 40 linear feet (must be 2.5 feet tall; berms may be combined with shrubs)	120 linear feet/40 x 12 36 shrubs required	36 shrubs

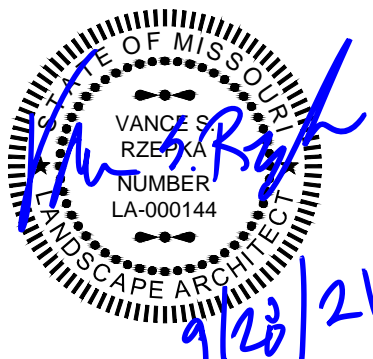
BY	REVISION	DATE
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VSR	CITY COMMENTS	--
VSR	DEVELOPMENT PLAN	9.28.2021



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# **OAKVIEW - LOT 3**

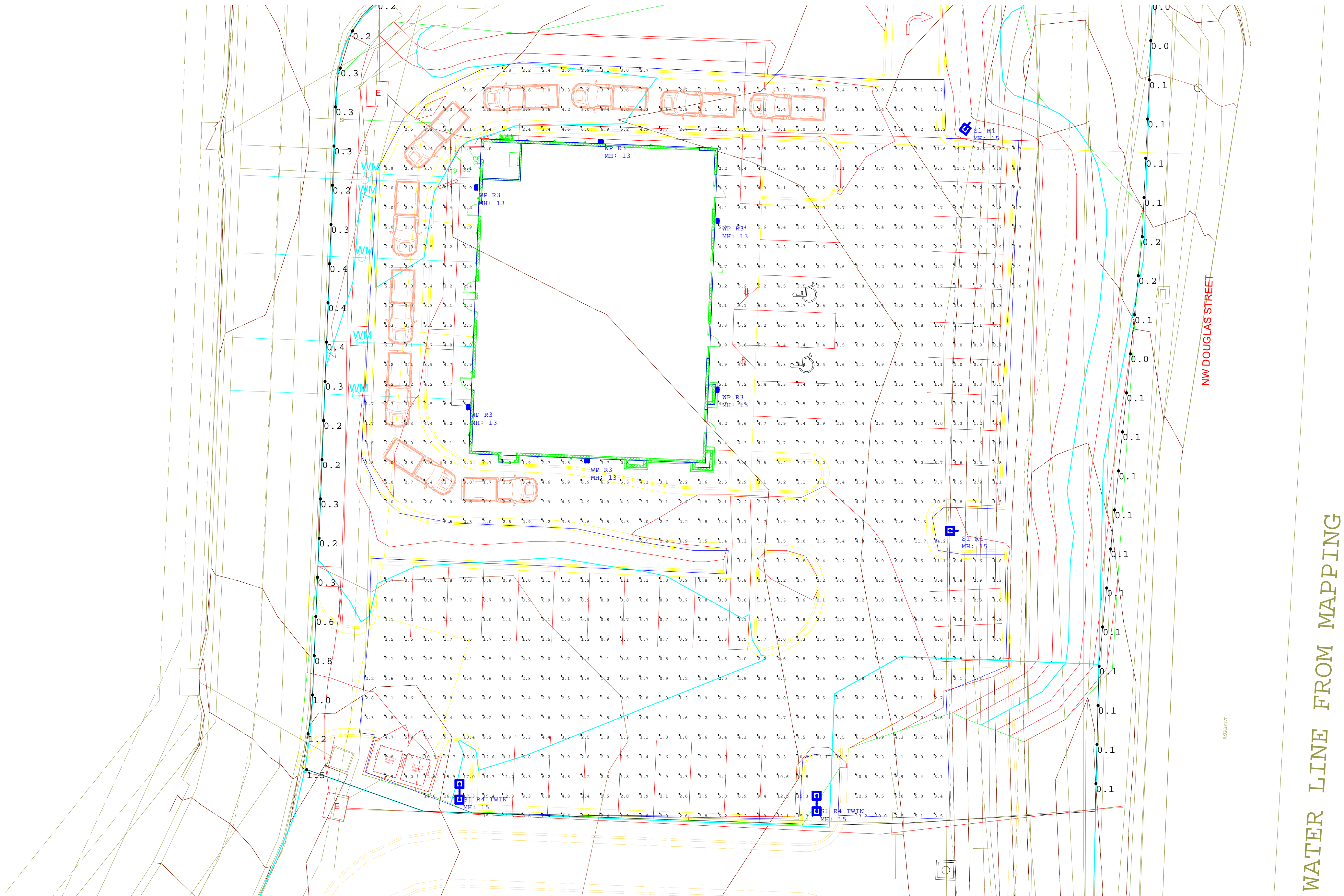
## LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

# SITE DEVELOPMENT PLANS

## LANDSCAPE PLAN

## L100





Luminaire Schedule					
Symbol	Qty	Label	Lum. Lumens	LLF	Description
	2	S1 R4	16573	0.950	RSX1 LED P4 40K R4
	2	S1 R4 TWIN	16573	0.950	(2) RSX1 LED P4 40K R4
	6	WP R3	7524	0.950	WDGE3 LED P1 70CRI R3 40K

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT_Planar	Fc	3.63	17.3	0.4	9.08	43.25
Property Line	Fc	0.22	1.5	0.0	N.A.	N.A.



#	Date	Comments
Revisions		

Drawn By:	
Checked By:	
Date:8/22/2021	
Scale:	

Oakview Lot 3

Lees Summit, Mo





# RSX1 LED Area Luminaire

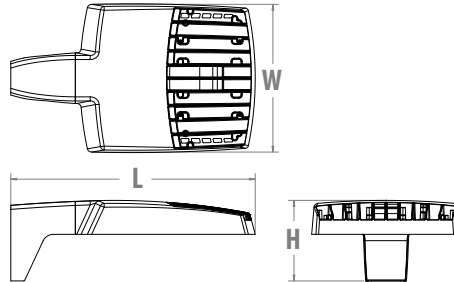


Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

## Specifications

EPA (ft²@0°):	0.57 ft² (0.05 m²)
Length:	21.8" (55.4 cm) (SPA mount)
Width:	13.3" (33.8 cm)
Height:	3.0" (7.6 cm) Main Body 7.2" (18.4 cm) Arm
Weight: (SPA mount):	22.0 lbs (10.0 kg)



## Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX1 delivers 7,000 to 17,000 lumens allowing it to replace 70W to 400W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

## Ordering Information

**EXAMPLE:** RSX1 LED P4 40K R3 MVOLT SPA DDBXD

RSX1 LED					
Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX1 LED	P1	30K 3000K	R2 Type 2 Wide	MVOLT (120V-277V) <sup>2</sup>	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°)
	P2	40K 4000K	R3 Type 3 Wide	HVOLT (347V-480V) <sup>3</sup>	RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°)
	P3	50K 5000K	R3S Type 3 Short	XVOLT (277V-480V) <sup>4</sup>	MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon)
	P4		R4 Type 4 Wide	(use specific voltage for options as noted)	IS Adjustable slipfitter (fits 2-3/8" OD tenon) <sup>6</sup>
			R4S Type 4 Short	120 <sup>3</sup> 277 <sup>5</sup>	WBA Wall bracket <sup>1</sup>
			R5 Type 5 Wide <sup>1</sup>	208 <sup>3</sup> 347 <sup>5</sup>	WBASC Wall bracket with surface conduit box
			R5S Type 5 Short <sup>1</sup>	240 <sup>3</sup> 480 <sup>5</sup>	AASP Adjustable tilt arm square pole mounting <sup>6</sup>
			AFR Automotive Front Row		AARP Adjustable tilt arm round pole mounting <sup>6</sup>
			AFRR90 Automotive Front Row Right Rotated		AAWB Adjustable tilt arm with wall bracket <sup>6</sup>
			AFRL90 Automotive Front Row Left Rotated		AAWSC Adjustable tilt arm wall bracket and surface conduit box <sup>6</sup>

Options			Finish
<b>Shipped Installed</b> HS House-side shield <sup>7</sup> PE Photocontrol, button style <sup>8,9</sup> PEX Photocontrol external threaded, adjustable <sup>9,10</sup> PER7 Seven-wire twist-lock receptacle only (no controls) <sup>9,11,12,13</sup> CE34 Conduit entry 3/4" NPT (Qty 2) SF Single fuse (120, 277, 347) <sup>5</sup> DF Double fuse (208, 240, 480) <sup>5</sup> SPD20KV 20KV Surge pack (10KV standard) FAO Field adjustable output <sup>9,13</sup> DMG 0-10V dimming extend out back of housing for external control (control ordered separate) <sup>9,13</sup>			DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured Dark Bronze DBLBXD Textured Black DNATXD Textured Natural Aluminum DWHGXD Textured White
<b>Shipped Installed</b> *Standalone and Networked Sensors/Controls (factory default settings, see table page 9) NLTAIR2 nLight AIR generation 2 <sup>13,14,15</sup> PIRHN Networked, Bi-Level motion/ambient sensor (for use with NLTAIR2) <sup>13,15,16</sup> BAA Buy America(n) Act Compliant *Note: PIRHN with nLight Air can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted. <b>Shipped Separately (requires some field assembly)</b> EGS External glare shield <sup>7</sup> EGFV External glare full visor (360° around light aperture) <sup>7</sup> BS Bird spikes <sup>17</sup>			



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## Ordering Information

### Accessories

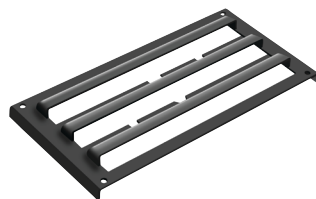
Ordered and shipped separately.

RSX1HS	RSX1 House side shield (includes 1 shield)
RSX1HSAFRR U	RSX1 House side shield for AFR rotated optics (includes 1 shield)
RSX1EGS (FINISH) U	External glare shield (specify finish)
RSX1EGFV (FINISH) U	External glare full visor (specify finish)
RSXRPA (FINISH) U	RSX Universal round pole adaptor plate (specify finish)
RSXWBA (FINISH) U	RSX WBA wall bracket (specify finish) <sup>1</sup>
RSXSCB (FINISH) U	RSX Surface conduit box (specify finish, for use with WBA, WBA not included)
DLL127F 1.5 JU	Photocell -SSL twist-lock (120-277V) <sup>18</sup>
DLL347F 1.5 CUL JU	Photocell -SSL twist-lock (347V) <sup>18</sup>
DLL480F 1.5 CUL JU	Photocell -SSL twist-lock (480V) <sup>18</sup>
DSHORT SBK U	Shorting cap <sup>18</sup>

### NOTES

- Any Type 5 distribution, is not available with WBA.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- XVOLT driver not available with P1 or P2. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE or PEX.
- Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- Maximum tilt is 90° above horizontal.
- It may be ordered as an accessory.
- Requires MVOLT or 347V.
- Not available in combination with other light sensing control options (following options cannot be combined: PE, PEX, PER7, FAO, DMG, PIRHN).
- Requires 120V, 208V, 240V or 277V.
- Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included. Dimming leads capped for future use.
- For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
- Two or more of the following options cannot be combined including DMG, PER7, FAO and PIRHN.
- Must be ordered with PIRHN.
- Requires MVOLT or HVOLT.
- Must be ordered with NLTAR2. For additional information on PIRHN visit [here](#).
- Must be ordered with fixture for factory pre-drilling.
- Requires luminaire to be specified with PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

## External Shields



House Side Shield



External Glare Shield

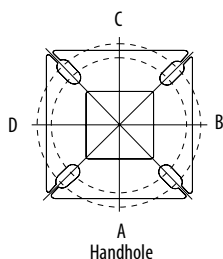


External 360 Full Visor

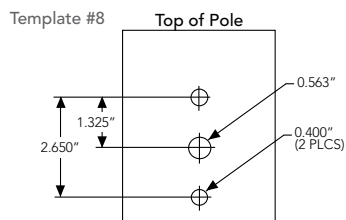
## Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit [Accessories](#).

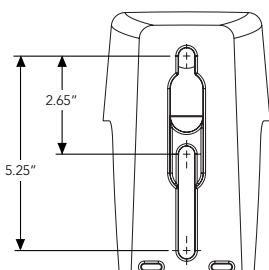
### HANDHOLE ORIENTATION



### RSX POLE DRILLING



### RSX STANDARD ARM & ADJUSTABLE ARM



### Round Tenon Mount - Pole Top Slipfitters










Tenon O.D.	RSX Mounting	Single	2 @ 180°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
2 - 3/8"	RPA, AARP	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 320	AS3-5 390	AS3-5 490
2 - 7/8"	RPA, AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	RPA, AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

### Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

### RSX1 - Luminaire EPA

\*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

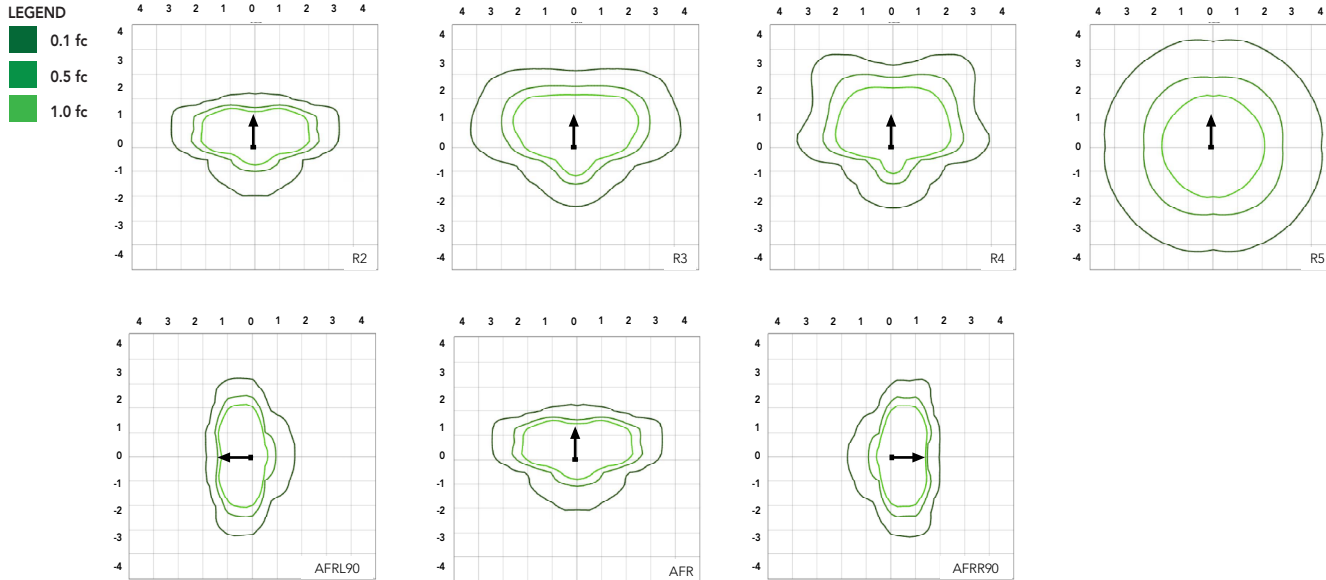
Fixture Quantity & Mounting Configuration		Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
Mounting Type	Tilt									
SPA - Square Pole Adaptor	0 °	0.57	1.03	1.05	1.52	1.36	2.03	1.31	1.7	2.26
RPA - Round Pole Adaptor		0.62	1.08	1.15	1.62	1.46	2.13	1.36	1.8	2.36
MA - Mast Arm Adaptor		0.49	0.95	0.89	1.36	1.2	1.87	1.23	1.54	2.1
IS - Integral Slipfitter AASP/AARP - Adjustable Arm Square/Round Pole	0 °	0.57	1.03	1.05	1.52	1.36	2.03	1.31	1.7	2.26
	10°	0.68	1.34	1.33	2	1.74	2.64	1.35	2.03	2.71
	20°	0.87	1.71	1.73	2.56	2.26	3.42	1.75	2.62	3.49
	30°	1.24	2.19	2.3	3.21	2.87	4.36	2.49	3.73	4.97
	40°	1.81	2.68	2.98	3.85	3.68	5.30	3.62	5.43	7.24
	45°	2.11	2.92	3.44	4.2	4.08	5.77	4.22	6.33	8.44
	50°	2.31	3.17	3.72	4.52	4.44	6.26	4.62	6.94	9.25
	60°	2.71	3.66	4.38	5.21	5.15	7.24	5.43	8.14	10.86
	70°	2.78	3.98	4.54	5.67	5.47	7.91	5.52	8.27	11.03
	80°	2.76	4.18	4.62	5.97	5.76	8.31	5.51	8.27	11.03
	90°	2.73	4.25	4.64	6.11	5.91	8.47	5.45	8.18	10.97



## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [RSX Area homepage](#).

Isofootcandle plots for the RSX1 LED P4 40K. Distances are in units of mounting height (20').



## Performance Data

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97
45°C	113°F	0.96
50°C	122°F	0.95

### Electrical Load

Performance Package	System Watts (W)	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	51W	0.42	0.25	0.21	0.19	0.14	0.11
P2	72W	0.60	0.35	0.30	0.26	0.21	0.15
P3	109W	0.91	0.52	0.45	0.39	0.31	0.23
P4	133W	1.11	0.64	0.55	0.48	0.38	0.27

### Projected LED Lumen Maintenance

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.97	>0.95	>0.92

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.



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## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	51W	R2	6,482	1	0	1	126	7,121	1	0	1	139	7,121	1	0	1	139
		R3	6,459	1	0	2	127	7,096	1	0	2	139	7,096	1	0	2	139
		R3S	6,631	1	0	1	129	7,286	1	0	2	142	7,286	1	0	2	142
		R4	6,543	1	0	2	128	7,189	1	0	2	141	7,189	1	0	2	141
		R4S	6,313	1	0	1	124	6,936	1	0	1	136	6,936	1	0	1	136
		R5	6,631	3	0	2	130	7,286	3	0	2	143	7,286	3	0	2	143
		R5S	6,807	3	0	1	133	7,479	3	0	1	147	7,479	3	0	1	147
		AFR	6,473	1	0	1	127	7,112	1	0	1	139	7,112	1	0	1	139
		AFRR90	6,535	2	0	2	127	7,179	2	0	2	140	7,179	2	0	2	140
		AFRL90	6,562	2	0	1	128	7,210	2	0	2	140	7,210	2	0	2	140
P2	72W	R2	8,991	2	0	1	123	9,878	2	0	1	135	9,878	2	0	1	135
		R3	8,959	2	0	2	124	9,843	2	0	2	137	9,843	2	0	2	137
		R3S	9,198	2	0	2	126	10,106	2	0	2	139	10,106	2	0	2	139
		R4	9,077	2	0	2	126	9,972	2	0	2	139	9,972	2	0	2	139
		R4S	8,757	1	0	2	122	9,622	2	0	2	134	9,622	2	0	2	134
		R5	9,198	4	0	2	128	10,106	4	0	2	140	10,106	4	0	2	140
		R5S	9,443	3	0	1	131	10,374	3	0	1	144	10,374	3	0	1	144
		AFR	8,979	2	0	1	125	9,865	2	0	1	137	9,865	2	0	1	137
		AFRR90	9,064	3	0	2	124	9,959	3	0	2	137	9,959	3	0	2	137
		AFRL90	9,102	3	0	2	125	10,001	3	0	2	137	10,001	3	0	2	137
P3	109W	R2	12,808	2	0	1	117	14,072	2	0	2	129	14,072	2	0	2	129
		R3	12,763	2	0	2	117	14,023	2	0	2	129	14,023	2	0	2	129
		R3S	13,104	2	0	2	120	14,397	2	0	2	132	14,397	2	0	2	132
		R4	12,930	2	0	2	119	14,206	2	0	2	130	14,206	2	0	2	130
		R4S	12,475	2	0	2	114	13,707	2	0	2	126	13,707	2	0	2	126
		R5	13,104	4	0	2	120	14,397	4	0	2	132	14,397	4	0	2	132
		R5S	13,452	3	0	2	123	14,779	3	0	2	136	14,779	3	0	2	136
		AFR	12,791	2	0	1	117	14,053	2	0	2	129	14,053	2	0	2	129
		AFRR90	12,913	3	0	3	118	14,187	3	0	3	130	14,187	3	0	3	130
		AFRL90	12,967	3	0	2	118	14,247	3	0	3	130	14,247	3	0	3	130
P4	133W	R2	14,943	2	0	2	112	16,417	2	0	2	123	16,417	2	0	2	123
		R3	14,890	2	0	3	112	16,360	2	0	3	123	16,360	2	0	3	123
		R3S	15,287	2	0	2	115	16,796	2	0	2	126	16,796	2	0	2	126
		R4	15,085	2	0	3	113	16,574	2	0	3	125	16,574	2	0	3	125
		R4S	14,554	2	0	2	109	15,991	2	0	2	120	15,991	2	0	2	120
		R5	15,287	4	0	2	115	16,796	4	0	2	126	16,796	4	0	2	126
		R5S	15,693	4	0	2	118	17,242	4	0	2	130	17,242	4	0	2	130
		AFR	14,923	2	0	2	112	16,395	2	0	2	123	16,395	2	0	2	123
		AFRR90	15,065	3	0	3	113	16,551	3	0	3	124	16,551	3	0	3	124
		AFRL90	15,128	3	0	3	114	16,621	3	0	3	125	16,621	3	0	3	125

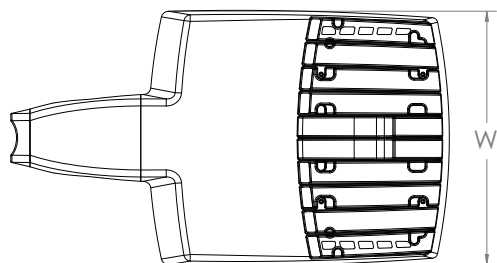


## Dimensions & Weights

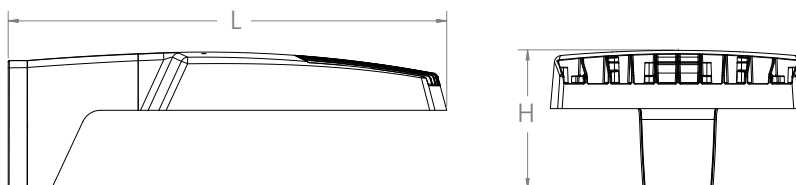
### Luminaire Weight by Mounting Type

Mounting Configuration	Total Luminaire Weight
SPA	22 lbs
RPA	24 lbs
MA	22 lbs
WBA	25 lbs
WBASC	28 lbs
IS	25 lbs
AASP	25 lbs
AARP	27 lbs
AAWB	28 lbs
AAWSC	31 lbs

#### RSX1 with Round Pole Adapter (RPA)



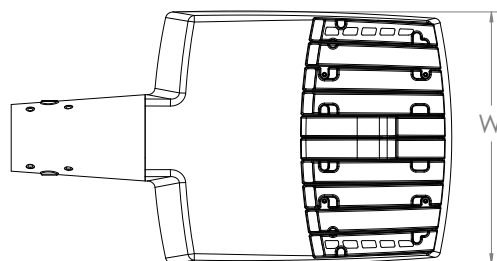
Length: 22.8" (57.9 cm)  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 7.2" (18.4 cm) Arm



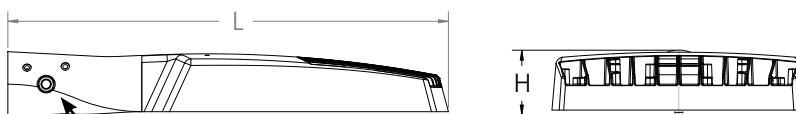
Note: RPA — Round Pole mount can also be used to mount on square poles by omitting the round pole adapter plate shown here.



#### RSX1 with Mast Arm Adapter (MA)

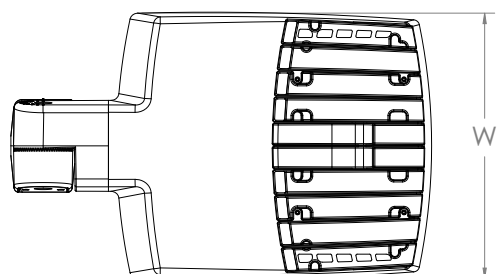


Length: 23.2" (59.1 cm)  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 3.5" (8.9 cm) Arm

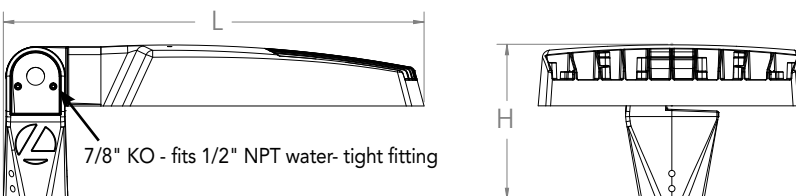


7/16" locking thru bolt/nut provided

#### RSX1 with Adjustable Slipfitter (IS)



Length: 20.7" (52.7 cm)  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 7.6" (19.3 cm) Arm

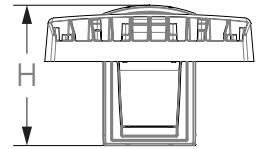
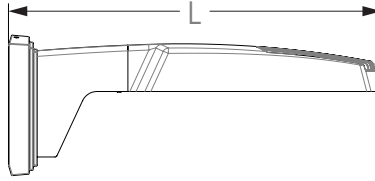
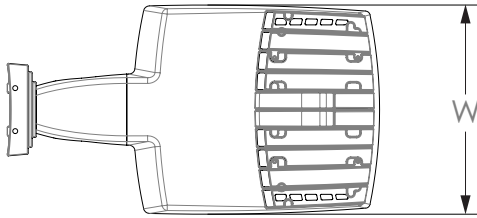


7/8" KO - fits 1/2" NPT water-tight fitting



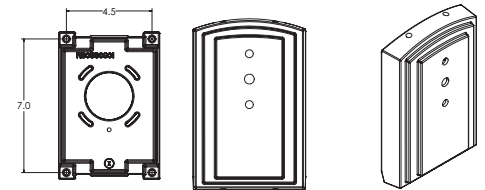
## Dimensions

### RSX1 with Wall Bracket (WBA)

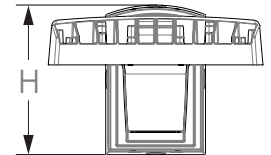
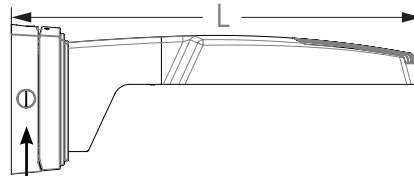
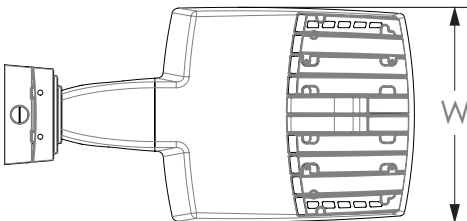


Length: 23.6" (59.9 cm)  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 8.9" (22.6 cm) Arm

#### Wall Bracket (WBA) Mounting Detail



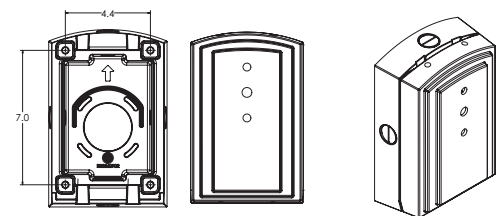
### RSX1 with Wall Bracket with Surface Conduit Box (WBASC)



3/4" NPT taps with plugs - Qty (4) provided

Length: 25.3" (64.3 cm)  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 9.2" (23.4 cm) Arm

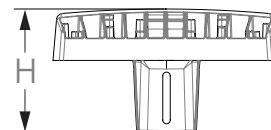
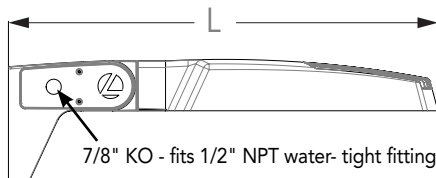
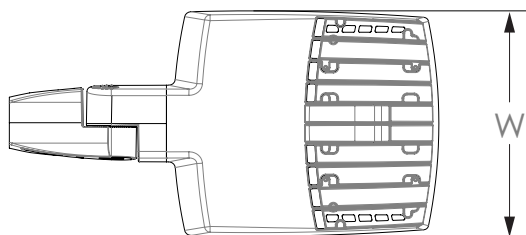
#### Surface Conduit Box (SCB) Mounting Detail



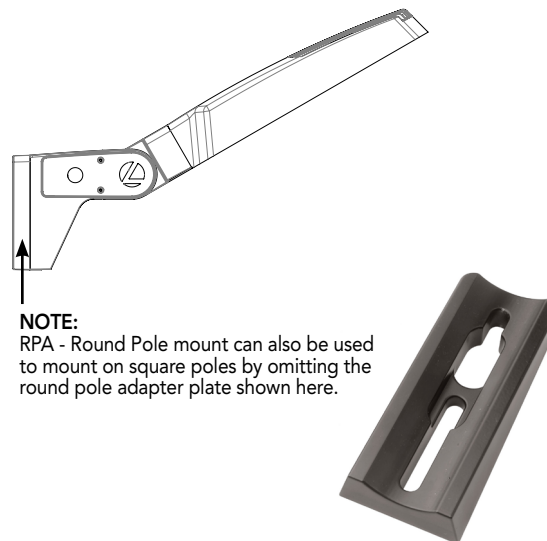


## Dimensions

### RSX1 with Adjustable Tilt Arm - Square or Round Pole (AASP or AARP)



Length: 25.3" (65.3 cm) **AASP**  
 26.3" (66.8 cm) **AARP**  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 7.2" (18.2 cm) Arm



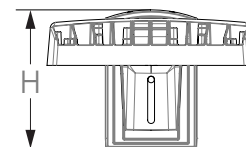
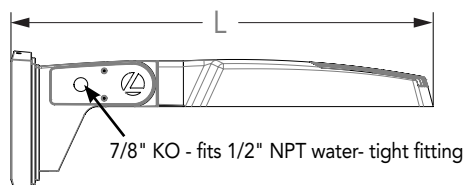
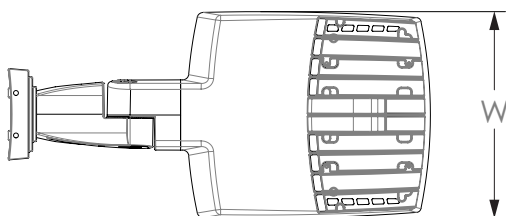
**NOTE:**  
 RPA - Round Pole mount can also be used to mount on square poles by omitting the round pole adapter plate shown here.

#### Notes

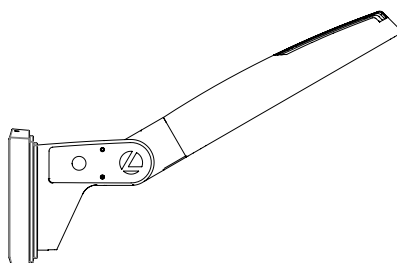
AASP: Requires 3.0" min. square pole for 1 at 90°. Requires 3.5" min. square pole for mounting 2, 3, 4 at 90°.

AARP: Requires 3.2" min. dia. round pole for 2, 3, 4 at 90°. Requires 3.0" min. dia. round pole for mounting 1 at 90°, 2 at 180°, 3 at 120°.

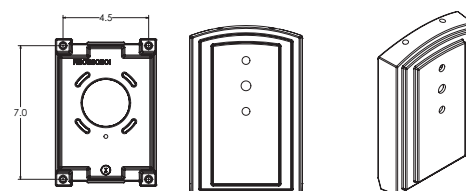
### RSX1 with Adjustable Tilt Arm with Wall Bracket (AAWB)



Length: 27.1" (68.8 cm)  
 Width: 13.3" (33.8 cm)  
 Height: 3.0" (7.6 cm) Main Body  
 8.9" (22.6 cm) Arm



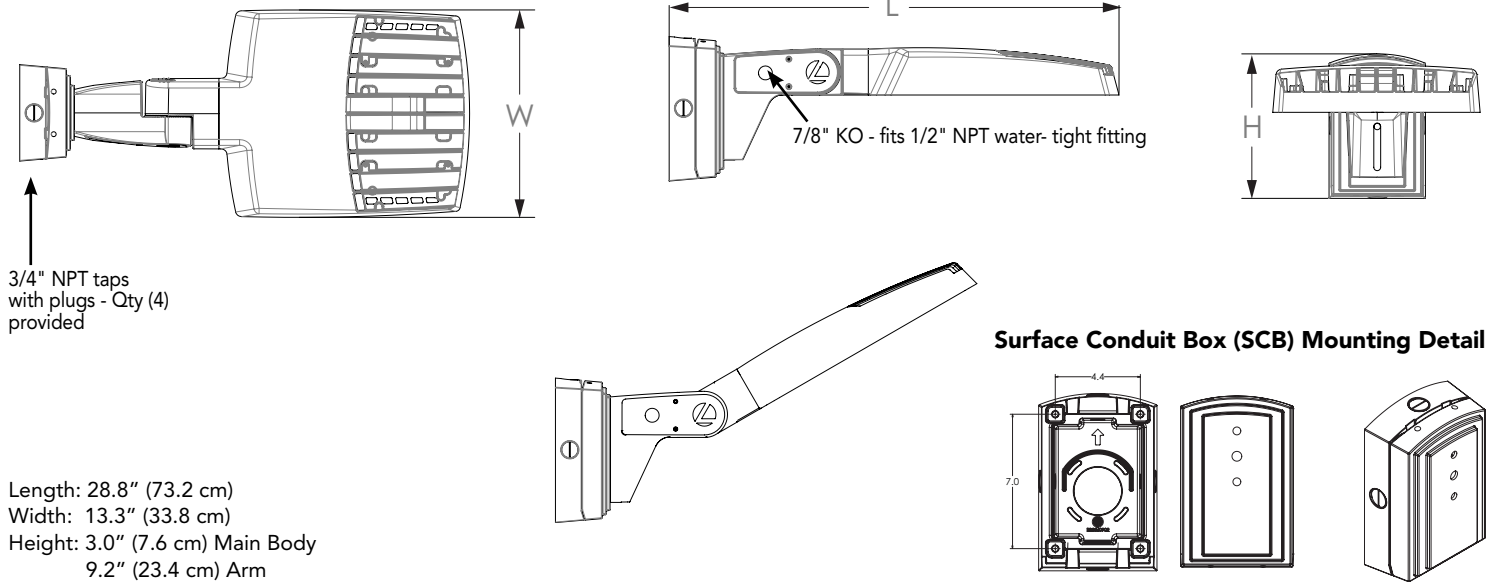
#### Wall Bracket (WBA) Mounting Detail



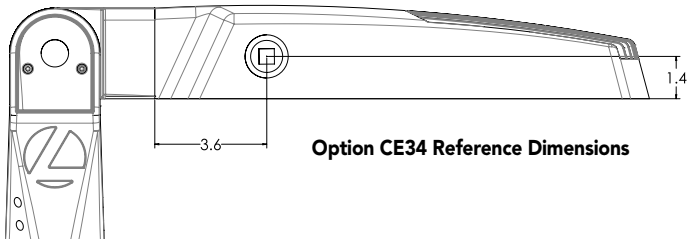


## Dimensions

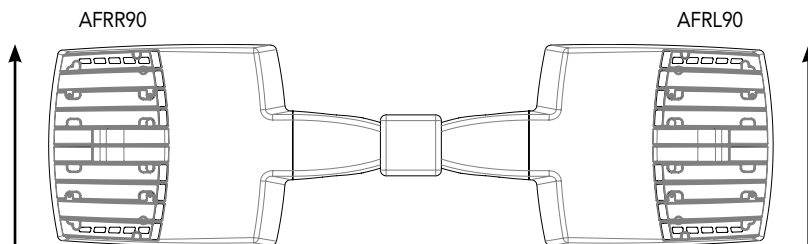
### RSX1 with Adjustable Tilt Arm with Wall Bracket and Surface Conduit Box (AAWSC)



### Additional Reference Drawings



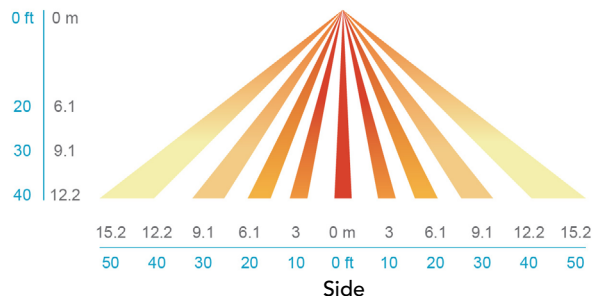
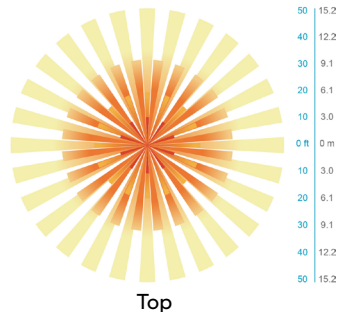
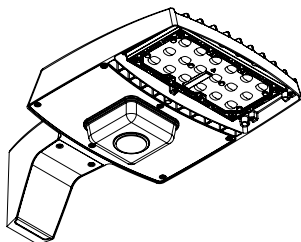
### Automotive Front Row - Rotated Optics (AFRL90/R90)



(Example: 2@180 - arrows indicate direction of light exiting the luminaire)



## nLight Sensor Coverage Pattern NLTAIR2 PIRHN



Motion Sensor Default Settings - Option PIRHN

Option	Dimmed State (unoccupied)	High Level (when occupied)	Photocell Operation	Dwell Time (occupancy time delay)	Ramp-up Time (from unoccupied to occupied)	Ramp-down Time (from occupied to unoccupied)
NLTAIR2 PIRHN	Approx. 30% Output	100% Output	Enabled @ 1.5FC	7.5 minutes	3 seconds	5 minutes

\*Note: NLTAIR2 PIRHN default settings including photocell set-point, high/low dim rates, and occupancy sensor time delay are all configurable using the Clairity Pro App. Sensor coverage pattern shown with luminaire at 0°. Sensor coverage pattern is affected when luminaire is tilted.

## FEATURES & SPECIFICATIONS

### INTENDED USE

The RSX LED area family is designed to provide a long-lasting, energy-efficient solution for the one-for-one replacement of existing metal halide or high pressure sodium lighting. The RSX1 delivers 7,000 to 17,000 lumens and is ideal for replacing 70W to 400W HID pole-mounted luminaires in parking lots and other area lighting applications.

### CONSTRUCTION

The RSX LED area luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED performance and extends component life. Integral "no drill" mounting arm allows the luminaire to be mounted on existing pole drillings, greatly reducing installation labor. The light engines and housing are sealed against moisture and environmental contaminants to IP66. The low-profile design results in a low EPA, allowing pole optimization. All mountings are rated for minimum 1.5 G vibration load per ANSI C136.31. 3G Mountings: Include SPA, RPA, MA, IS, AASP, and AARP rated for 3G vibration. 1.5G Mountings: Include WBA, WBASC, AAWB and AAWSC rated for 1.5G vibration.

### FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures superior adhesion as well as a minimum finish thickness of 3 mils. The result is a high-quality finish that is warranted not to crack or peel.

### OPTICS

Precision acrylic refractive lenses are engineered for superior application efficiency, distributing the light to where it is needed most. Available in short and wide pattern distributions including Type 2, Type 3, Type 3S, Type 4, Type 4S, Type 5, Type 5S, AFR (Automotive Front Row), and AFR rotated AFR90 and ARFL90.

### ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted on metal-core circuit boards and aluminum heat sinks to maximize heat dissipation. Light engines are IP66 rated. LED lumen maintenance is >L92/100,000 hours. CCT's of 3000K, 4000K and 5000K (minimum 70 CRI) are available. Class 1 electronic drivers ensure system power factor >90% and THD <20%. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

### STANDARD CONTROLS

The RSX LED area luminaire has a wide assortment of control options. Dusk to dawn controls include MVOLT and 347V button-type photocells and NEMA twist-lock photocell receptacles.

### nLIGHT AIR CONTROLS

The RSX LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing with photocontrol functionality and is suitable for mounting heights up to 40 feet. No commissioning is required when using factory default settings that provide basic stand-alone motion occupancy dimming that is switched on and off with a built-in photocell. See chart above for motion sensor default out-of-box settings. For more advanced wireless functionality, such as group dimming, nLight AIR can be commissioned using a smartphone and the easy-to-use CLAIRITY app. nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found [here](#).

### INSTALLATION

Integral "no-drill" mounting arm allows for fast, easy mounting using existing pole drillings. Select the "SPA" option for square poles and the "RPA" option to mount to round poles. Note, the RPA mount can also be used for mounting to square poles by omitting the RPA adapter plate. Select the "MA" option to attach the luminaire to a 2 3/8" horizontal mast arm or the "IS" option for an adjustable slipfitter that mounts on a 2 3/8" OD tenon. The adjustable slipfitter has an integral junction box and offers easy installation. Can be tilted up to 90° above horizontal. Additional mountings are available including a wall bracket, adjustable tilt arm for direct-to-pole and wall and a surface conduit box for wall mount applications.

### LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

### BUY AMERICAN

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to [www.acuitybrands.com/buy-american](http://www.acuitybrands.com/buy-american) for additional information.

### WARRANTY

5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/support/customer-support/terms-and-conditions](http://www.acuitybrands.com/support/customer-support/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.





# WEDGE3 LED

## Architectural Wall Sconce



Buy American

Catalog  
Number

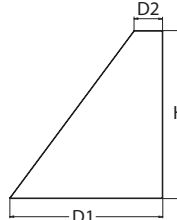
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

### Specifications

**Depth (D1):** 8"  
**Depth (D2):** 1.5"  
**Height:** 9"  
**Width:** 18"  
**Weight:** 19.5 lbs  
 (without options)



### Introduction

The WEDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WEDGE family provides additional energy savings and code compliance.

WEDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

### WEDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WEDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WEDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WEDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WEDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

### Ordering Information

**EXAMPLE: WEDGE3 LED P3 40K 70CRI R3 MVOLT SRM DDBXD**

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WEDGE3 LED	P1	30K 3000K	70CRI	R2 Type 2	MVOLT	<b>Shipped included</b>
	P2	40K 4000K	80CRI	R3 Type 3	347 <sup>1</sup>	SRM Surface mounting bracket
	P3	50K 5000K		R4 Type 4	480 <sup>1</sup>	ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) <sup>4</sup>
	P4			RFT Forward Throw		
						<b>Shipped separately</b>
						AWS 3/8inch Architectural wall spacer
						PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.

Options				Finish
E15WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (15W, 5°C min)	<b>Standalone Sensors/Controls</b>		DDBXD Dark bronze
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)	PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.	DBLXD Black
PE <sup>2</sup>	Photocell, Button Type	PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	DNAXD Natural aluminum
DMG <sup>3</sup>	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.	DWHXD White
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.	PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	DSSXD Sandstone
SPD10KV	10kV Surge pack	<b>Networked Sensors/Controls</b>		DDBTXD Textured dark bronze
		NLTAIR2 PIR	nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.	DBLBXD Textured black
		NLTAIR2 PIRH	nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.	DNATXD Textured natural aluminum
		See page 4 for out of box functionality		DWHGXD Textured white
				DSSTXD Textured sandstone

### Accessories

Ordered and shipped separately.

WEDGEAWS DDBXD U WEDGE 3/8inch Architectural Wall Spacer (specify finish)  
 WEDGE3PBBW DDBXD U WEDGE3 surface-mounted back box (specify finish)

### NOTES

- 347V and 480V not available with E15WH and E20WC.
- PE not available in 480V and with sensors/controls.
- DMG option not available with sensors/controls.
- Not qualified for DLC. Not available with emergency battery backup or sensors/controls



COMMERCIAL OUTDOOR

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WEDGE3 LED  
 Rev. 03/17/21



## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1	52W	R2	7,037	136	1	0	1	7,649	148	2	0	1	7,649	148	2	0	1
		R3	6,922	134	1	0	2	7,524	145	1	0	2	7,524	145	1	0	2
		R4	7,133	138	1	0	2	7,753	150	1	0	2	7,753	150	1	0	2
		RFT	6,985	135	1	0	2	7,592	147	1	0	2	7,592	147	1	0	2
P2	59W	R2	7,968	135	2	0	1	8,661	147	2	0	1	8,661	147	2	0	1
		R3	7,838	133	1	0	2	8,519	144	1	0	2	8,519	144	1	0	2
		R4	8,077	137	1	0	2	8,779	149	1	0	2	8,779	149	1	0	2
		RFT	7,909	134	1	0	2	8,597	146	2	0	2	8,597	146	2	0	2
P3	71W	R2	9,404	132	2	0	1	10,221	143	2	0	1	10,221	143	2	0	1
		R3	9,250	130	2	0	2	10,054	141	2	0	2	10,054	141	2	0	2
		R4	9,532	134	2	0	2	10,361	145	2	0	2	10,361	145	2	0	2
		RFT	9,334	131	2	0	2	10,146	142	2	0	2	10,146	142	2	0	2
P4	88W	R2	11,380	129	2	0	1	12,369	140	2	0	1	12,369	140	2	0	1
		R3	11,194	127	2	0	2	12,167	138	2	0	2	12,167	138	2	0	2
		R4	11,535	131	2	0	2	12,538	142	2	0	2	12,538	142	2	0	2
		RFT	11,295	128	2	0	2	12,277	139	2	0	2	12,277	139	2	0	2

### Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	52W	0.437	0.246	0.213	0.186	0.150	0.110
P2	59W	0.498	0.287	0.251	0.220	0.175	0.126
P3	71W	0.598	0.344	0.300	0.262	0.210	0.152
P4	88W	0.727	0.424	0.373	0.333	0.260	0.190

### Lumen Output in Emergency Mode (4000K, 70 CRI)

Option	Dist. Type	Lumens
E15WH	R2	3,185
	R3	3,133
	R4	3,229
	RFT	3,162
E20WC	R2	3,669
	R3	3,609
	R4	3,719
	RFT	3,642

### Lumen Multiplier for 80CRI

CCT	Multiplier
30K	0.891
40K	0.906
50K	0.906

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.97

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.98	>0.97	>0.92

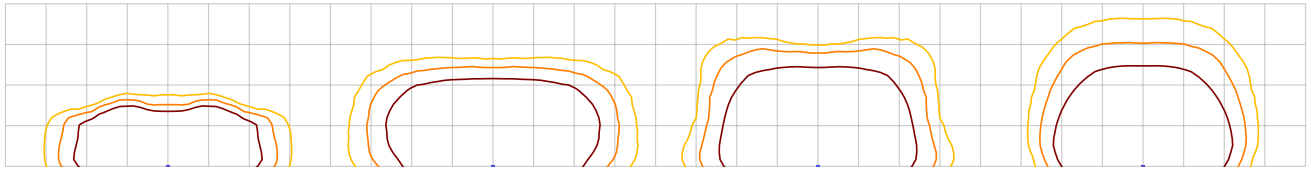
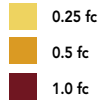




## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage.  
Tested in accordance with IESNA LM-79 and LM-80 standards.

### LEGEND



MH = 15ft  
Grid = 15ft x 15ft

WDGE3 LED P3 40K 70CRI R2

WDGE3 LED P3 40K 70CRI R3

WDGE3 LED P3 40K 70CRI R4

WDGE3 LED P3 40K 70CRI RFT

## Emergency Egress Options

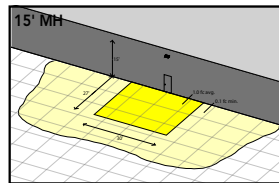
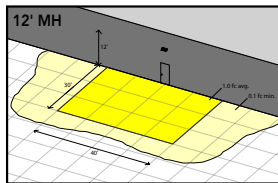
### Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain, minimum of 60% of the light output at the end of 90 minutes.

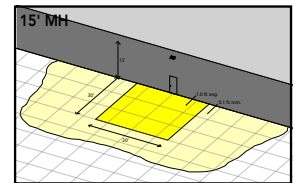
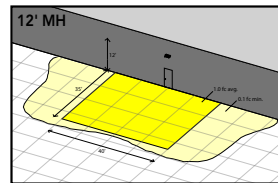
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The examples below show illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E15WH or E20WC and R4 distribution.

Grid = 10ft x 10ft



WDGE3 LED xx 40K 70CRI R4 MVOLT E15WH



WDGE3 LED xx 40K 70CRI R4 MVOLT E20WC



### Motion/Ambient Sensor (PIR\_, PIRH\_)

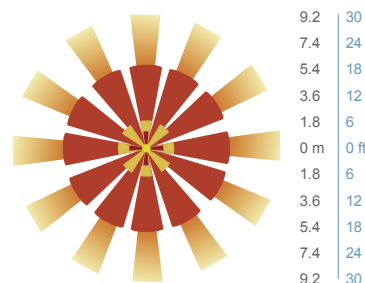
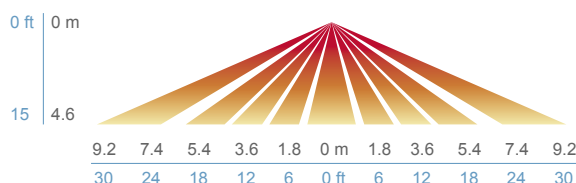
Motion/Ambient sensor (Sensor Switch MSOD) is integrated into the the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

### Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

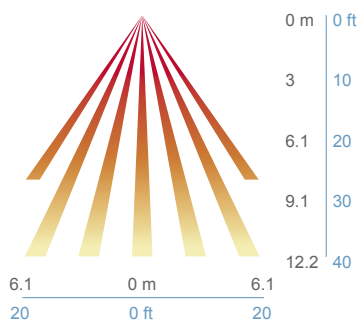
#### PIR

##### HIGH VIEW

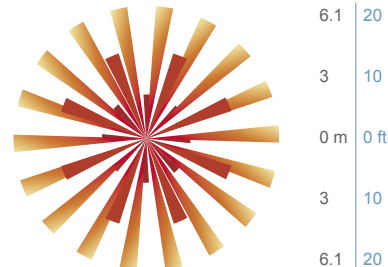


#### PIRH

##### SIDE VIEW



##### TOP VIEW



### Motion/Ambient Sensor Default Settings

Option	Dim Level	High Level (when triggered)	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR1FC3V, PIRH1FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 1fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
NLTAIR2 PIR, NLTAIR2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec





**NLTAIR2 PIR – nLight AIR  
Motion/Ambient Sensor**

D = 8"

H = 11"

W = 18"



**PBBW – Surface-Mounted Back Box**  
Use when there is no junction box available.

D = 1.75"

H = 9"

W = 18"



**AWS – 3/8inch Architectural Wall Spacer**

D = 0.38"

H = 4.4"

W = 7.5"

## FEATURES & SPECIFICATIONS

### INTENDED USE

Common architectural look, with clean rectilinear shape, of the WEDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

### CONSTRUCTION

The single-piece die-cast aluminum housing to optimize thermal transfer from the light engine and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

### FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

### OPTICS

Individually formed acrylic lenses are engineered for superior application efficiency which maximizes the light in the areas where it is most needed. Light engines are available in 3000 K, 4000 K or 5000 K configurations. The WEDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

### ELECTRICAL

Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L92/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2).

### INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

### LISTINGS

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature and SRM mounting only.

### BUY AMERICAN

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FARS, DFARS and DOT. Please refer to [www.acuitybrands.com/resources/buy-american](http://www.acuitybrands.com/resources/buy-american) for additional information.

### WARRANTY

5-year limited warranty. Complete warranty terms located at:  
[www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.