

**UTILITY PLAN NOTES:**

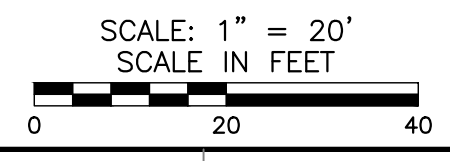
THE PROPERTY OWNER(S) ACKNOWLEDGE AND AGREE TO THE FOLLOWING UPON APPROVAL OF PRELIMINARY UTILITY PLAN:

- COLORADO SPRINGS UTILITIES (SPRINGS UTILITIES) SHALL MAKE THE FINAL DETERMINATION OF THE LOCATION OF ALL WATER, WASTEWATER, ELECTRIC AND GAS FACILITIES, WHICH MAY NOT BE THE SAME LOCATION AS SHOWN ON THIS PRELIMINARY UTILITY PLAN.
- PROPERTY OWNER(S) ("OWNER") ACKNOWLEDGES THAT THE CONNECTION AND/OR EXTENSION OF UTILITY SERVICES TO THE PROPERTY IDENTIFIED IN THIS PRELIMINARY UTILITY PLAN ("PROPERTY") SHALL BE IN ACCORD WITH ALL APPLICABLE CODES AND REGULATIONS, SPRINGS UTILITIES LINE EXTENSION & SERVICE STANDARDS ("STANDARDS"), TARIFFS, COLORADO SPRINGS CITY CODE, RESOLUTIONS, AND POLICIES, AND Pikes Peak Regional Building Department Codes, IN EFFECT AT THE TIME OF UTILITY SERVICE CONNECTION AND/OR EXTENSION.
- OWNER ACKNOWLEDGES RESPONSIBILITY FOR THE COSTS OF EXTENSIONS OR UTILITY SYSTEM IMPROVEMENTS THAT SPRINGS UTILITIES DETERMINES NECESSARY TO PROVIDE UTILITY SERVICES TO THE PROPERTY OR TO ENSURE TIMELY DEVELOPMENT OF INTEGRATED UTILITY SYSTEMS SERVING THE PROPERTY AND AREAS OUTSIDE THE PROPERTY (INCLUDING THE COSTS TO DESIGN AND INSTALL WATER SYSTEMS, WASTEWATER COLLECTION SYSTEMS, AND ANY GAS OR ELECTRIC LINES TO AND WITHIN THE PROPERTY). OWNER MAY BE ELIGIBLE FOR A COST RECOVERY AGREEMENT AS PROVIDED IN UTILITIES RULES AND REGULATIONS.
- SPRINGS UTILITIES UTILITY SERVICES ARE AVAILABLE ON A "FIRST-COME, FIRST-SERVED" BASIS, AND THEREFORE NO SPECIFIC ALLOCATIONS OR AMOUNTS OF UTILITY SERVICES, FACILITIES, CAPACITIES OR SUPPLIES ARE RESERVED FOR THE OWNER, AND SPRINGS UTILITIES MAKES NO COMMITMENT AS TO THE AVAILABILITY OF ANY UTILITY SERVICE UNTIL SUCH TIME AS AN APPLICATION FOR PERMANENT SERVICE IS APPROVED BY SPRINGS UTILITIES.
- THE RELOCATION OR ALTERATION OF ANY EXISTING UTILITY FACILITIES WITHIN THE PROPERTY WILL BE AT THE OWNER'S SOLE COST AND EXPENSE. IF SPRINGS UTILITIES DETERMINES THAT OWNER'S RELOCATION OR ALTERATION REQUIRES NEW OR UPDATED EASEMENTS, OWNER SHALL CONVEY THOSE EASEMENTS PRIOR TO RELOCATING OR ALTERING THE EXISTING UTILITY FACILITIES.
- OWNER SHALL DEDICATE BY PLAT AND/OR CONVEY BY RECORDED DOCUMENT, ALL PROPERTY AND EASEMENTS THAT SPRINGS UTILITIES DETERMINES ARE REQUIRED FOR ALL UTILITY SYSTEM FACILITIES NECESSARY TO SERVE THE PROPERTY OR TO ENSURE DEVELOPMENT OF AN INTEGRATED UTILITY SYSTEM. ALL EASEMENTS GRANTED BY SEPARATE INSTRUMENT SHALL UTILIZE SPRINGS UTILITIES THEN-CURRENT PERMANENT EASEMENT AGREEMENT FORM.
- THE WATER SYSTEM FACILITIES MUST MEET SPRINGS UTILITIES CRITERIA FOR WATER QUALITY, RELIABILITY AND PRESSURE, INCLUDING LOOPING REQUIREMENTS (SEE SPRINGS UTILITIES LINE EXTENSION AND SERVICE STANDARDS).
- OWNER RECOGNIZES THAT THE EXTENSION OF WATER SYSTEM FACILITIES MAY AFFECT THE QUALITY OF WATER IN THE SPRINGS UTILITIES WATER SYSTEM. WHEN WATER QUALITY IS AFFECTED, OWNER ACKNOWLEDGES RESPONSIBILITY FOR ANY COSTS THAT SPRINGS UTILITIES DETERMINES NECESSARY IN ORDER TO MAINTAIN WATER QUALITY IN ITS SYSTEM AS A RESULT OF OWNER'S WATER SYSTEM EXTENSIONS. OWNER MAY BE REQUIRED TO SUBMIT A WATER QUALITY PLAN FOR THE PROJECT.
- OWNER MUST CONTACT SPRINGS UTILITIES FIELD ENGINEERING TO DETERMINE THE LOCATION OF ALL NATURAL GAS AND ELECTRIC METERS AND TRANSFORMERS AND TO SECURE APPROVAL OF GAS-SERVICE-LINE PRESSURES IN EXCESS OF SPRINGS UTILITIES STANDARD GAS SYSTEM PRESSURE. (CONTACT FIELD ENGINEERING NORTH 668-4985 OR SOUTH 668-5564).
- IT SHALL NOT BE PERMISSIBLE FOR ANY PERSON TO MODIFY THE GRADE OF THE EARTH WITHIN ANY SPRINGS UTILITIES EASEMENT OR RIGHTS OF WAY WITHOUT THE WRITTEN APPROVAL OF SPRINGS UTILITIES. IMPROVEMENTS, STRUCTURES AND TREES SHALL NOT BE LOCATED WITHIN UTILITY EASEMENT, SHALL NOT VIOLATE NATIONAL ELECTRIC SAFETY CODE (NESC) PROVISIONS AND CLEARANCES, AND SHALL NOT IMPAIR ACCESS OR THE ABILITY TO MAINTAIN UTILITY FACILITIES.
- SPRINGS UTILITIES APPROVAL OF THIS PRELIMINARY UTILITY PLAN SHALL NOT BE CONSTRUED AS A LIMITATION UPON THE AUTHORITY OF SPRINGS UTILITIES TO APPLY ITS STANDARDS, AND IF THERE ARE ANY CONFLICTS BETWEEN ANY APPROVED DRAWINGS AND ANY PROVISION OF STANDARDS OR THE CITY CODE, THEN THE STANDARDS OR CITY CODE SHALL APPLY. SPRINGS UTILITIES APPROVAL OF THIS PRELIMINARY UTILITY PLAN SHALL NOT BE CONSTRUED AS A LIMITATION UPON THE AUTHORITY OF THE CITY OF COLORADO SPRINGS OR SPRINGS UTILITIES TO ADOPT DIFFERENT ORDINANCES, RULES, REGULATIONS, RESOLUTIONS, POLICIES OR CODES WHICH CHANGE ANY OF THE PROVISIONS OF THE STANDARDS SO LONG AS THESE APPLY TO THE CITY GENERALLY AND ARE IN ACCORD WITH THE THEN-CURRENT TARIFFS, RATES AND POLICIES OF SPRINGS UTILITIES.

**REFERENCE**

1. SURVEY INFORMATION PROVIDED BY OCULUS, INC. DATED 01/18/2021 AND 04/19/2021.

**NOTE TO CONTRACTOR:** PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, BROADBAND, PHONE, SANITARY AND STORM SEWERS. ANY CONFLICT SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND APPROPRIATE AUTHORITIES.



PATRICK T. BENNETT  
EOR PE #39072  
\*HAND SIGNATURE ON FILE

CITY FILE NO. AR DP 21-00520

**COLORADO LICENSED PROFESSIONAL ENGINEER**  
39072

**REVISION RECORD**

NO.	DATE	DESCRIPTION
01	10/15/2021	PER CITY REVIEW COMMENTS
02	01/24/2022	PER CITY REVIEW COMMENTS

**Civil & Environmental Consultants, Inc.**  
3000 Little Hills Expressway · Suite 102 · St. Charles, MO 63301  
314-656-4566 · 866-250-3679  
www.cecinc.com

**TIDE DRY CLEANERS**  
6160 DUBLIN BOULEVARD  
COLORADO SPRINGS, CO

**Tide**

**PRELIMINARY UTILITY AND PUBLIC FACILITY PLAN**

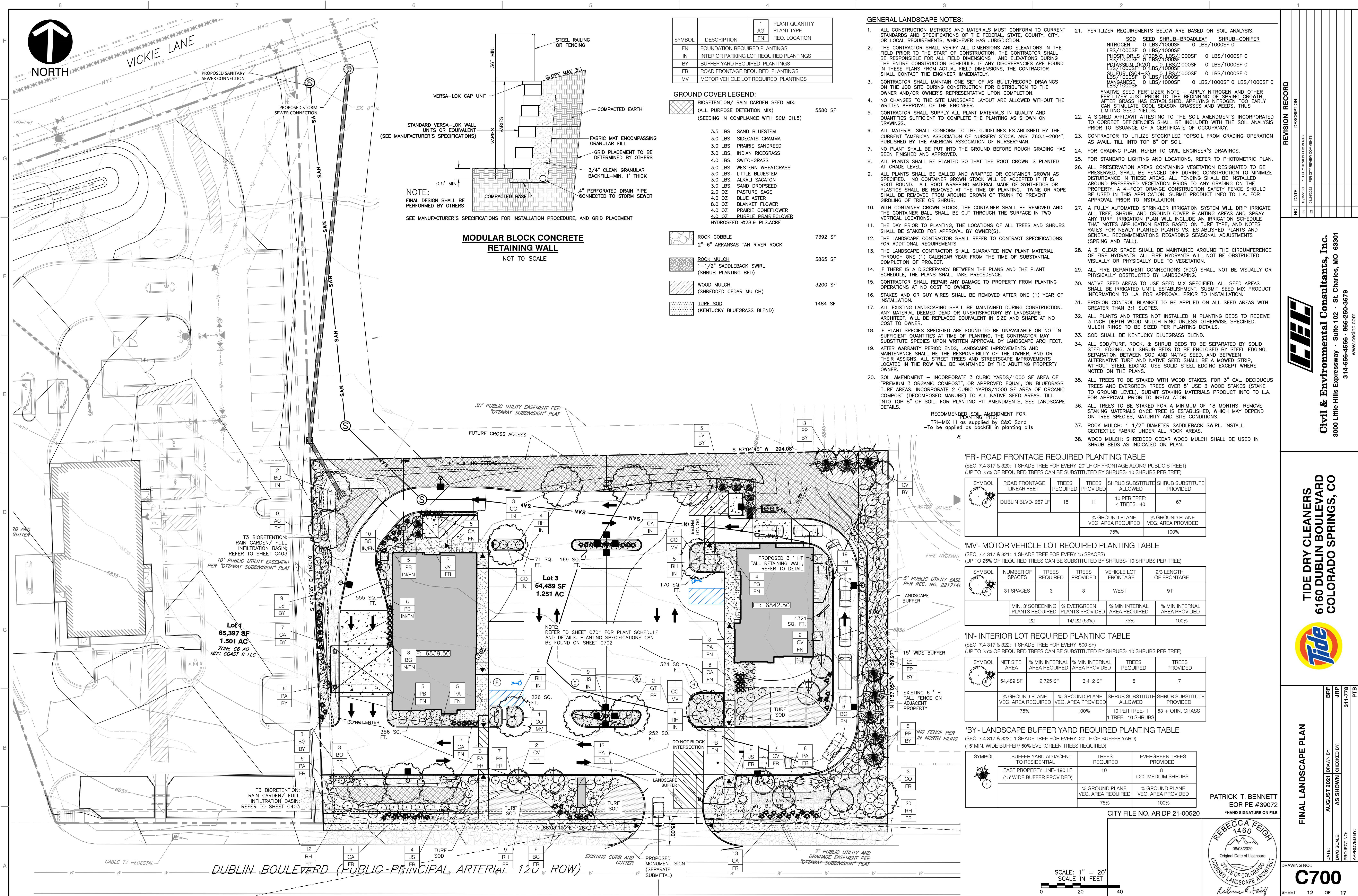
DATE:	DWG SCALE:	PROJECT NO:	APPROVED BY:
AUGUST 2021	AS SHOWN	311-778	PTB

DRAWING NO.: **C500**

SHEET 11 OF 17



\\saw-04-ar\projects\130-000\131-778\131-778-000\DWG\131-778-000-001-C700.dwg (131-778-000-001-C700.dwg) - L.P. 1/25/2023 8:14 AM



SYMBOL	DESCRIPTION	1	PLANT QUANTITY
		AG	PLANT TYPE
FN	FOUNDATION REQUIRED PLANTINGS	FN	REQ. LOCATION
IN	INTERIOR PARKING LOT REQUIRED PLANTINGS		
BY	BUFFER YARD REQUIRED PLANTINGS		
FR	ROAD FRONTAGE REQUIRED PLANTINGS		
MV	MOTOR VEHICLE LOT REQUIRED PLANTINGS		

GROUND COVER LEGEND:	
	BIORETENTION/ RAIN GARDEN SEED MIX: (ALL PURPOSE DETENTION MIX) (SEEDING IN COMPLIANCE WITH SCM CH.5)
	3.5 LBS SAND BLUESTEM
	3.0 LBS SIDEOOTS GRAMMA
	3.0 LBS PRAIRIE SANDREED
	3.0 LBS INDIAN RICEGRASS
	4.0 LBS SWITCHGRASS
	3.0 LBS WESTERN WHEATGRASS
	3.0 LBS LITTLE BLUESTEM
	3.0 LBS ALKALI SACATON
	3.0 LBS SAND DROPSSEED
	2.0 OZ PASTURE SAGE
	4.0 OZ BLUE ASTER
	8.0 OZ BLANKET FLOWER
	4.0 OZ PRAIRIE CONEFLOWER
	4.0 OZ PURPLE PRAIRIECLOVER
	HYDROSEED @28.9 PLS/ACRE

	ROCK COBBLE	7392 SF
	2"-6" ARKANSAS TAN RIVER ROCK	
	1-1/2" SADDLEBACK SWIRL (SHRUB PLANTING BED)	3865 SF
	WOOD MULCH (SHREDDED CEDAR MULCH)	3200 SF
	TURF SOD (KENTUCKY BLUEGRASS BLEND)	1484 SF

GENERAL LANDSCAPE NOTES:

- ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY, OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
  - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND ELEVATIONS DURING THE ENTIRE CONSTRUCTION SCHEDULE. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD DIMENSIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
  - CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT/RECORD DRAWINGS ON THE JOB SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
  - NO CHANGES TO THE SITE LANDSCAPE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
  - CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUALITY AND QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN ON DRAWINGS.
  - ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT "AMERICAN ASSOCIATION OF NURSERY STOCK, ANSI Z60.1-2004", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN.
  - NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED.
  - ALL PLANTS SHALL BE PLANTED SO THAT THE ROOT CROWN IS PLANTED AT GRADE LEVEL.
  - ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING. TWINE OR ROPE SHALL BE REMOVED FROM AROUND GROWN OF TRUNK TO PREVENT GIRDLING OF TREE OR SHRUB.
  - WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
  - THE DAY PRIOR TO PLANTING, THE LOCATIONS OF ALL TREES AND SHRUBS SHALL BE STAKED FOR APPROVAL BY OWNER(S).
  - THE LANDSCAPE CONTRACTOR SHALL REFER TO CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - THE LANDSCAPE CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE (1) CALENDAR YEAR FROM THE TIME OF SUBSTANTIAL COMPLETION OF PROJECT.
  - IF THERE IS A DISCREPANCY BETWEEN THE PLANS AND THE PLANT SCHEDULE, THE PLANS SHALL TAKE PRECEDENCE.
  - CONTRACTOR SHALL REPAIR ANY DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
  - STAKES AND OR GUY WIRES SHALL BE REMOVED AFTER ONE (1) YEAR OF INSTALLATION.
  - ALL EXISTING LANDSCAPING SHALL BE MAINTAINED DURING CONSTRUCTION. ANY MATERIAL DEEMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT, WILL BE REPLACED EQUIVALENT IN SIZE AND SHAPE AT NO COST TO OWNER.
  - IF PLANT SPECIES SPECIFIED ARE FOUND TO BE UNAVAILABLE OR NOT IN SUFFICIENT QUANTITIES AT TIME OF PLANTING, THE CONTRACTOR MAY SUBSTITUTE SPECIES UPON WRITTEN APPROVAL BY LANDSCAPE ARCHITECT.
  - AFTER WARRANTY PERIOD ENDS, LANDSCAPE IMPROVEMENTS AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNER, AND OR THEIR ASSIGNS. ALL STREET TREES AND STREETSCAPE IMPROVEMENTS LOCATED IN THE ROW WILL BE MAINTAINED BY THE ADJUTING PROPERTY OWNER.
  - SOIL AMENDMENT - INCORPORATE 3 CUBIC YARDS/1000 SF AREA OF "PREMIUM 3 ORGANIC COMPOST", OR APPROVED EQUAL, ON BLUEGRASS TURF AREAS. INCORPORATE 2 CUBIC YARDS/1000 SF AREA OF ORGANIC COMPOST (DECOMPOSED MANURE) TO ALL NATIVE SEED AREAS. TILL INTO TOP 8" OF SOIL. FOR PLANTING PIT AMENDMENTS, SEE LANDSCAPE DETAILS.
- RECOMMENDED SOIL AMENDMENT FOR PLANTING PITS:  
TRI-MIX III as supplied by C&C Sand  
-To be applied as backfill in planting pits
- REVISION RECORD
- | NO. | DATE       | DESCRIPTION              |
|-----|------------|--------------------------|
| 01  | 10/10/2021 | PER CITY REVIEW COMMENTS |
| 02  | 01/12/2022 | PER CITY REVIEW COMMENTS |
21. FERTILIZER REQUIREMENTS BELOW ARE BASED ON SOIL ANALYSIS.
- |  | NITROGEN     | SOD          | SEED         | SHRUB-BROADLEAF | SHRUB-CONIFER |
|--|--------------|--------------|--------------|-----------------|---------------|
|  | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF    | 0 LBS/1000SF  |
|  | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF    | 0 LBS/1000SF  |
|  | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF    | 0 LBS/1000SF  |
|  | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF    | 0 LBS/1000SF  |
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|  | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF    | 0 LBS/1000SF  |
|  | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF | 0 LBS/1000SF    | 0 LBS/1000SF  |
- \*NATIVE SEED FERTILIZER NOTE - APPLY NITROGEN AND OTHER FERTILIZER JUST PRIOR TO THE BEGINNING OF SPRING GROWTH, AFTER GRASS HAS ESTABLISHED. APPLYING NITROGEN TOO EARLY CAN STIMULATE COOL SEASON GRASSES AND WEEDS, THUS LIMITING SEED YIELDS.
22. A SIGNED AFFIDAVIT ATTESTING TO THE SOIL AMENDMENTS INCORPORATED TO CORRECT DEFICIENCIES SHALL BE INCLUDED WITH THE SOIL ANALYSIS PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
23. CONTRACTOR TO UTILIZE STOCKPILED TOPSOIL FROM GRADING OPERATION AS AVAIL. TILL INTO TOP 8" OF SOIL.
24. FOR GRADING PLAN, REFER TO CIVIL ENGINEER'S DRAWINGS.
25. FOR STANDARD LIGHTING AND LOCATIONS, REFER TO PHOTOMETRIC PLAN.
26. ALL PRESERVATION AREAS CONTAINING VEGETATION DESIGNATED TO BE PRESERVED SHALL BE MAINTAINED OFF DURING CONSTRUCTION TO MINIMIZE DISTURBANCE IN THESE AREAS. ALL FENCING SHALL BE INSTALLED AROUND PRESERVED VEGETATION PRIOR TO ANY GRADING ON THE PROPERTY. A 4'-FOOT ORANGE CONSTRUCTION SAFETY FENCE SHOULD BE USED IN THIS APPLICATION. SUBMIT PRODUCT INFO TO L.A. FOR APPROVAL PRIOR TO INSTALLATION.
27. A FULLY AUTOMATED SPRINKLER IRRIGATION SYSTEM WILL DRIP IRRIGATE ALL TREE, SHRUB, AND GROUND COVER PLANTING AREAS AND SPRAY ANY TURF. IRRIGATION PLAN WILL INCLUDE AN IRRIGATION SCHEDULE THAT NOTES APPLICATION RATES BASED ON TURF TYPE, AND NOTES RATES FOR NEWLY PLANTED PLANTS VS. ESTABLISHED PLANTS AND GENERAL RECOMMENDATIONS REGARDING SEASONAL ADJUSTMENTS (SPRING AND FALL).
28. A 3' CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS. ALL FIRE HYDRANTS WILL NOT BE OBSTRUCTED VISUALLY OR PHYSICALLY DUE TO VEGETATION.
29. ALL FIRE DEPARTMENT CONNECTIONS (FDC) SHALL NOT BE VISUALLY OR PHYSICALLY OBSTRUCTED BY LANDSCAPING.
30. NATIVE SEED AREAS TO USE SEED MIX SPECIFIED. ALL SEED AREAS SHALL BE IRRIGATED UNTIL ESTABLISHMENT. SUBMIT SEED MIX PRODUCT INFORMATION TO L.A. FOR APPROVAL PRIOR TO INSTALLATION.
31. EROSION CONTROL BLANKET TO BE APPLIED ON ALL SEED AREAS WITH GREATER THAN 3:1 SLOPES.
32. ALL PLANTS AND TREES NOT INSTALLED IN PLANTING BEDS TO RECEIVE 3 INCH DEPTH WOOD MULCH RING UNLESS OTHERWISE SPECIFIED. MULCH RINGS TO BE SIZED PER PLANTING DETAILS.
33. SOD SHALL BE KENTUCKY BLUEGRASS BLEND.
34. ALL SOD/TURF, ROCK, & SHRUB BEDS TO BE SEPARATED BY SOLID STEEL EDGING. ALL SHRUB BEDS TO BE ENCLOSED BY STEEL EDGING. SEPARATION BETWEEN SOD AND NATIVE SEED, AND BETWEEN ALTERNATIVE TURF AND NATIVE SEED SHALL BE A MOWED STRIP, WITHOUT STEEL EDGING. USE SOLID STEEL EDGING EXCEPT WHERE NOTED ON THE PLANS.
35. ALL TREES TO BE STAKED WITH WOOD STAKES. FOR 3" CAL. DECIDUOUS TREES AND EVERGREEN TREES OVER 8' USE 3 WOOD STAKES (STAKE TO GROUND LEVEL). SUBMIT STAKING MATERIALS PRODUCT INFO TO L.A. FOR APPROVAL PRIOR TO INSTALLATION.
36. ALL TREES TO BE STAKED FOR A MINIMUM OF 18 MONTHS. REMOVE STAKING MATERIALS ONCE TREE IS ESTABLISHED, WHICH MAY DEPEND ON TREE SPECIES, MATURITY AND SITE CONDITIONS.
37. ROCK MULCH: 1 1/2" DIAMETER SADDLEBACK SWIRL. INSTALL GEOTEXTILE FABRIC UNDER ALL ROCK AREAS.
38. WOOD MULCH: SHREDDED CEDAR WOOD MULCH SHALL BE USED IN SHRUB BEDS AS INDICATED ON PLAN.

FR- ROAD FRONTAGE REQUIRED PLANTING TABLE

(SEC. 7.4 317 & 320: 1 SHADE TREE FOR EVERY 20' LF OF FRONTAGE ALONG PUBLIC STREET)  
(UP TO 25% OF REQUIRED TREES CAN BE SUBSTITUTED BY SHRUBS- 10 SHRUBS PER TREE)

SYMBOL	ROAD FRONTAGE LINEAR FEET	TREES REQUIRED	TREES PROVIDED	SHRUB SUBSTITUTE ALLOWED	SHRUB SUBSTITUTE PROVIDED
	DUBLIN BLVD- 287 LF	15	11	10 PER TREE: 4 TREES=40	67
				% GROUND PLANE VEG. AREA REQUIRED	% GROUND PLANE VEG. AREA PROVIDED
				75%	100%

MV- MOTOR VEHICLE LOT REQUIRED PLANTING TABLE

(SEC. 7.4 317 & 321: 1 SHADE TREE FOR EVERY 15 SPACES)  
(UP TO 25% OF REQUIRED TREES CAN BE SUBSTITUTED BY SHRUBS- 10 SHRUBS PER TREE)

SYMBOL	NUMBER OF SPACES	TREES REQUIRED	TREES PROVIDED	VEHICLE LOT FRONTAGE	2/3 LENGTH OF FRONTAGE
	31 SPACES	3	3	WEST	91'
		MIN. 3' SCREENING PLANTS REQUIRED	% EVERGREEN PLANTS PROVIDED	% MIN INTERNAL AREA PROVIDED	% MIN INTERNAL AREA PROVIDED
		22	14/ 22 (63%)	75%	100%

IN- INTERIOR LOT REQUIRED PLANTING TABLE

(SEC. 7.4 317 & 322: 1 SHADE TREE FOR EVERY 500 SF)  
(UP TO 25% OF REQUIRED TREES CAN BE SUBSTITUTED BY SHRUBS- 10 SHRUBS PER TREE)

SYMBOL	NET SITE AREA	% MIN INTERNAL AREA REQUIRED	% MIN INTERNAL AREA PROVIDED	TREES REQUIRED	TREES PROVIDED
	54,489 SF	2,725 SF	3,412 SF	6	7
	% GROUND PLANE VEG. AREA REQUIRED	% GROUND PLANE VEG. AREA PROVIDED	SHRUB SUBSTITUTE ALLOWED	SHRUB SUBSTITUTE PROVIDED	
	75%	100%	10 PER TREE- 1 TREE=10 SHRUBS	53 + ORN. GRASS	

BY- LANDSCAPE BUFFER YARD REQUIRED PLANTING TABLE

(SEC. 7.4 317 & 323: 1 SHADE TREE FOR EVERY 20' LF OF BUFFER YARD)  
(15' MIN. WIDE BUFFER/ 50% EVERGREEN TREES REQUIRED)

SYMBOL	BUFFER YARD ADJACENT TO RESIDENTIAL	TREES REQUIRED	EVERGREEN TREES PROVIDED
	EAST PROPERTY LINE- 180 LF (15' WIDE BUFFER PROVIDED)	10	8
	% GROUND PLANE VEG. AREA REQUIRED	% GROUND PLANE VEG. AREA PROVIDED	
	75%	100%	

CITY FILE NO. AR DP 21-00520

PATRICK T. BENNETT  
EOR PE #39072  
\*HAND SIGNATURE ON FILE



SCALE: 1" = 20'  
SCALE IN FEET

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**TIDE DRY CLEANERS**  
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COLORADO SPRINGS, CO

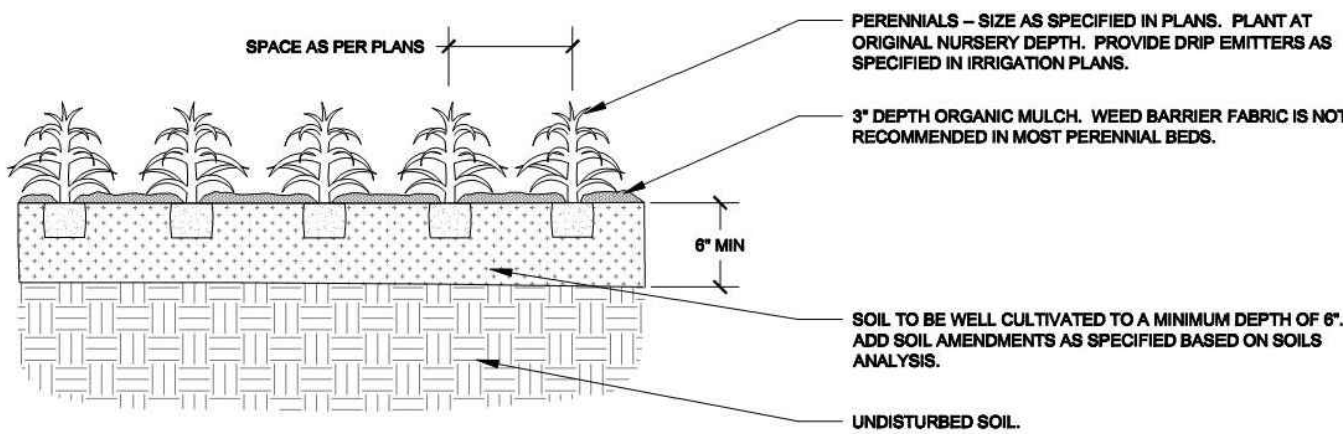
**FINAL LANDSCAPE PLAN**

DATE:	BRF	JRP	PTB
AUGUST 2021			
DWG SCALE:	AS SHOWN	CHECKED BY:	
PROJECT NO:	311-778	APPROVED BY:	

DRAWING NO: **C700**  
SHEET 12 OF 17



- NOTES:
1. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
  2. PLANT GROUND COVERS AND PERENNIALS LEVEL AND AT GRADE.
  3. PRUNE ALL DEAD OR BROKEN PARTS PRIOR TO PLANTING.
  4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
  5. ALL PERENNIALS PLANTED IN ROCK MULCH AREAS TO HAVE ORGANIC MULCH RINGS AROUND THE BASE OF THE PLANT.

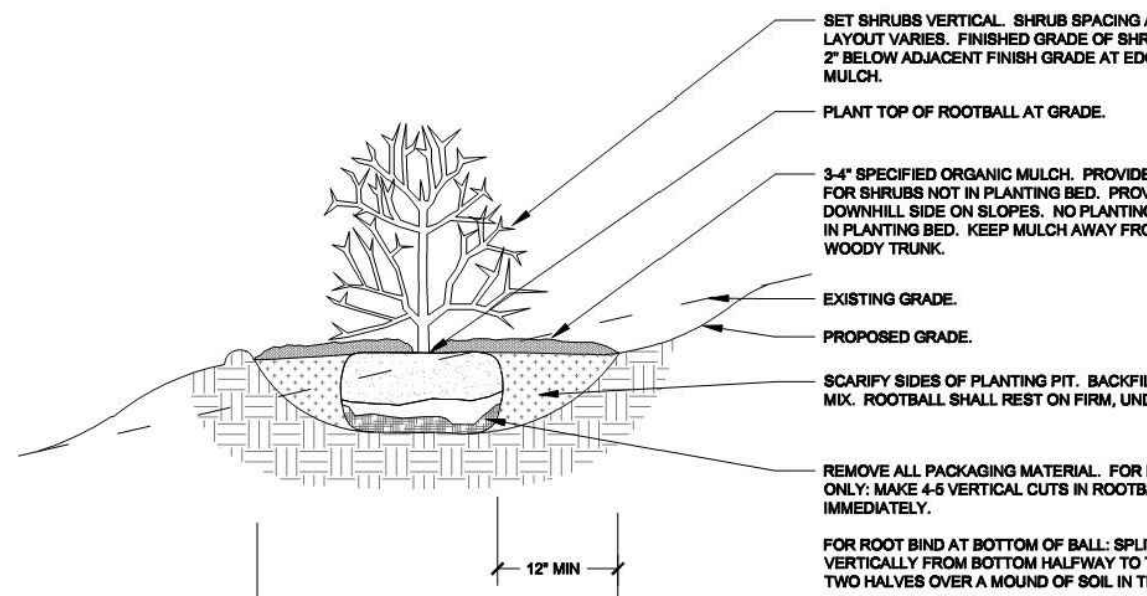


### PERENNIAL/GROUND COVER PLANTING DETAIL

NOT TO SCALE

SECTION

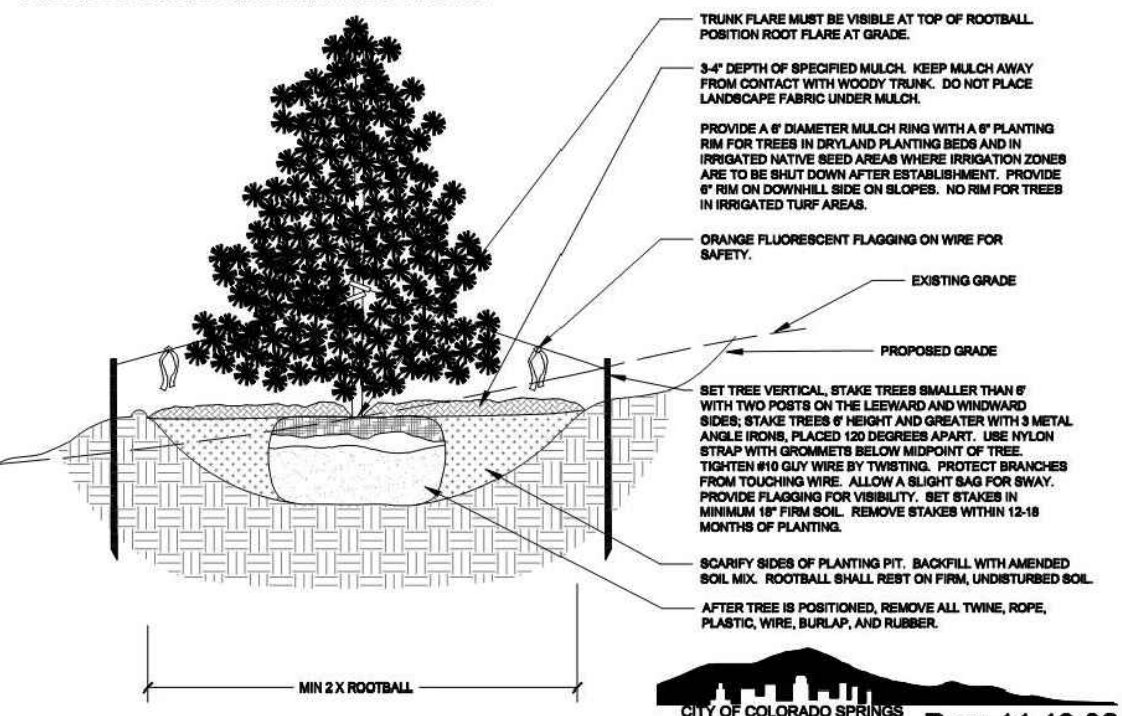
- NOTES:
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
  2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
  3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
  4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
  5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
  6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



### SHRUB PLANTING ON SLOPES DETAIL

NOT TO SCALE

- NOTES:
1. DO NOT REMOVE OR CUT LEADER.
  2. PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
  3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
  4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
  5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
  6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
  7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
  8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.

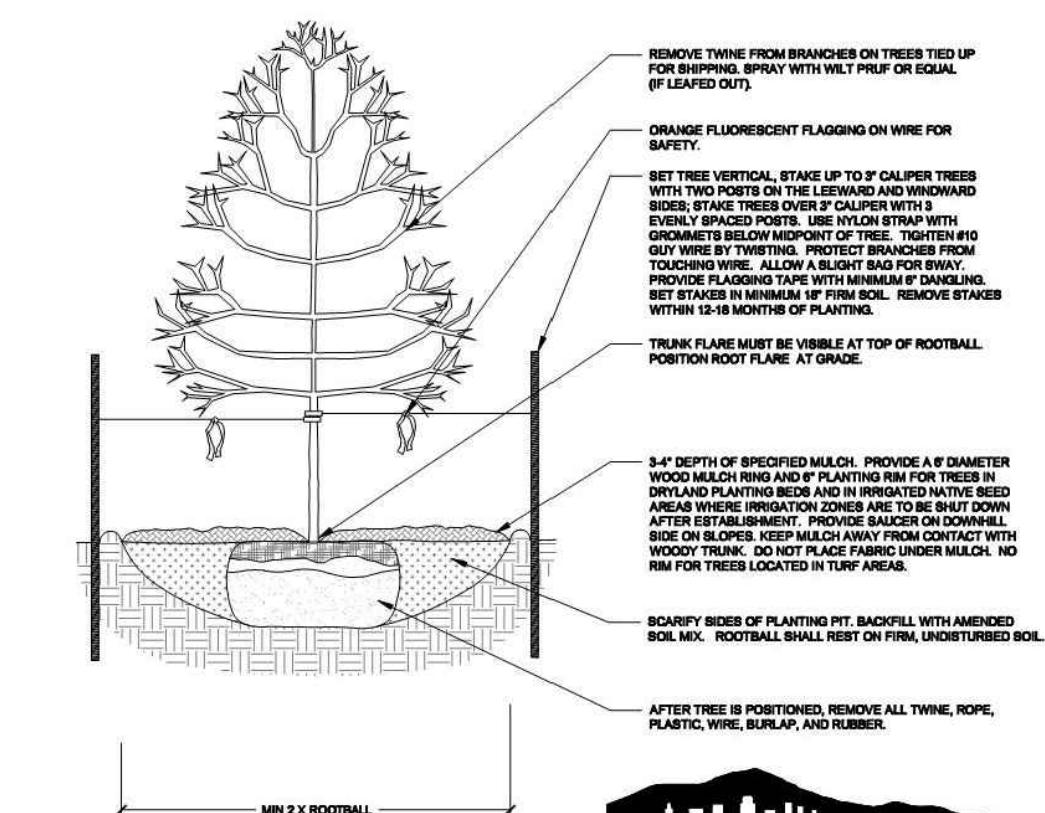


### EVERGREEN TREE PLANTING ON SLOPES DETAIL

NOT TO SCALE

SECTION

- NOTES:
1. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
  2. AT TIME OF PLANTING, DO NOT REMOVE OR CUT LEADER AND PRUNE ONLY DEAD OR BROKEN BRANCHES, CROSS OVER BRANCHES, AND WEAK OR NARROW CROTCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED, HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
  3. STRUCTURAL PRUNING SHOULD NOT BEGIN UNTIL AFTER ESTABLISHMENT PERIOD, USUALLY TWO GROWING SEASONS.
  4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
  5. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
  6. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
  7. WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK, USE ELECTRICAL OR DUCT TAPE, NOT TYNE.
  8. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
  9. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



### DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

SECTION

## UNIT FOUR

A P P E N D I X E

## Appendix E: Schematic Landscape Diagram

To be submitted in conformance with Policy 311. (See reverse side for example.)

Name of project: Tide Dry Cleaners

Date: 01/20/2022

Climate zone (from Figure 4 of Landscape Policy Manual) - circle one:

Foothills

Foothills & Plains

Plains

Plant Communities

- to be labeled by number(s) on diagram:

- 1 - Semi-arid Shrublands
- 2 - Pinon-Juniper Woodlands
- 3 - Prairie
- 4 - Lower Elevation Riparian
- 5 - Foothill Shrublands
- 6 - Ponderosa Pine Forest
- 7 - Upper Elevation Riparian
- 8 - Douglas-fir Forest

Hydrozones (supplemental water)

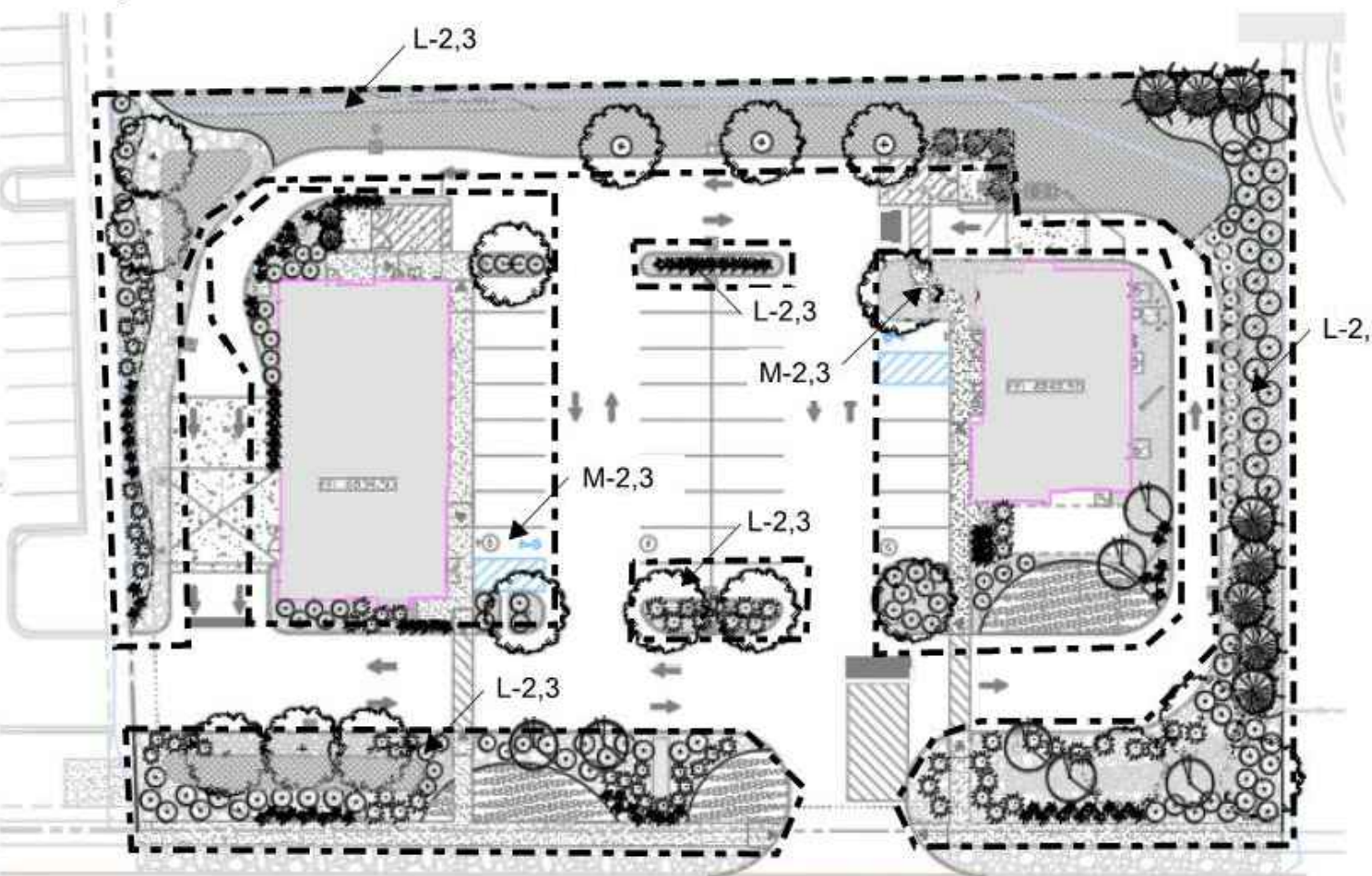
- to be labeled by letter(s) on diagram:

V - Very Low (0 to 7 inches per year)

L - Low (7 to 15 inches per year)

M - Moderate (15 to 25 inches per year)

H - High (more than 25 inches per year)



COLORADO SPRINGS LANDSCAPE CODE AND POLICY MANUAL

## OVERALL PLANTING SCHEDULE

### TREE/ EVERGREENS SCHEDULE

LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE COND	REMARKS	HEIGHT AT MATURITY	SIG. PLANT- PLANT KEY
+	BO	5	Betula occidentalis	Water Birch	2" Cal. 8' & B	Deciduous Tree	45'	B- 457S
+	CO	10	Celtis occidentalis	Hockberry	2" Cal. 8' & B	Deciduous Tree	35'	3457DA
+	CV	9	Crataegus viridis 'Winter King'	Winter King Hawthorn	2" Cal. 8' & B	Ornamental Tree	20'-25'	235AD
+	GT	2	Gleditsia tricanthos 'Permian Shademaster'	Shademaster Honeylocust	2" Cal. 8' & B	Deciduous Tree	50'	45A
+	PP	8	Picea pungens 'Baker'	Baker's Blue Spruce	6" Ht. 8' & B	Evergreen Tree	25'	678S

PERCENT SIGNATURE: (60% MIN. - POLICY 311.3K)

TOTAL NUMBER OF TREES: 34

TOTAL NUMBER OF SIGNATURE TREES: 23= 67.6%

### SHRUBS SCHEDULE

+	AC	9	Amorpha canescens	Lead Plant	24" No. 5 Cont.	Deciduous Shrub	3'-4'	B/C- 235A
+	FP	20	Fallugia paradoxa	Apache Plume	24" No. 5 Cont.	Deciduous Shrub	3'-4'	B- 12356D
+	JS	31	Juniperus sabina 'Buffalo'	Buffalo Juniper	24" No. 5 Cont.	Evergreen Shrub	2'-3'	C- 568A
+	JV	5	Junipers scopulorum	Rocky Mountain Juniper	4'-5" Ht. 8' & B	Evergreen Tree	25'	125678D
+	PA	41	Picea abies 'Nidiformis'	Bird's Nest Spruce	24" No. 5 Cont.	Evergreen Shrub	2'-3'	78S
+	PB	30	Prunus besseyi 'Pawnee Buttes'	Pawnee Buttes Sand Cherry	24" No. 5 Cont.	Deciduous Shrub	3'-4'	B- 1345A
+	RH	82	Rhus aromatica 'Gro-Low'	Gro-Low Sumac	18" No. 5 Cont.	Deciduous Shrub	3'-4'	N- 23456DA

PERCENT SIGNATURE: (60% MIN. - POLICY 311.3K)

TOTAL NUMBER OF SHRUBS: 217

TOTAL NUMBER OF SIGNATURE SHRUBS: 184= 86.3%

### PERENNIALS/ GRASSES SCHEDULE

+	BG	35	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Gramma	12"-18" No. 1 Cont.	Ornamental Grass	3'	N- 12350
+	CA	58	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Reed Grass	12"-18" No. 1 Cont.	Ornamental Grass	3'	A

## REVISION RECORD

NO	DATE	DESCRIPTION
01	10/10/2021	PER CITY REVIEW COMMENTS
02	01/20/2022	PER CITY REVIEW COMMENTS

**Civil & Environmental Consultants, Inc.**  
3000 Little Hills Expressway · Suite 102 · St. Charles, MO 63031  
314-656-4566 · 866-250-3679  
www.cedinc.com

**TIDE DRY CLEANERS**  
6160 DUBLIN BOULEVARD  
COLORADO SPRINGS, CO



## FINAL LANDSCAPE PLAN NOTES AND DETAILS

DATE:	BRF	BRF	PTB
AUGUST 2021	DRAWN BY:	311-778	
AS SHOWN	CHECKED BY:		
	APPROVED BY:		

PATRICK T. BENNETT  
EOR PE #39072

\*HAND SIGNATURE ON FILE

CITY FILE NO. AR DP 21-00520

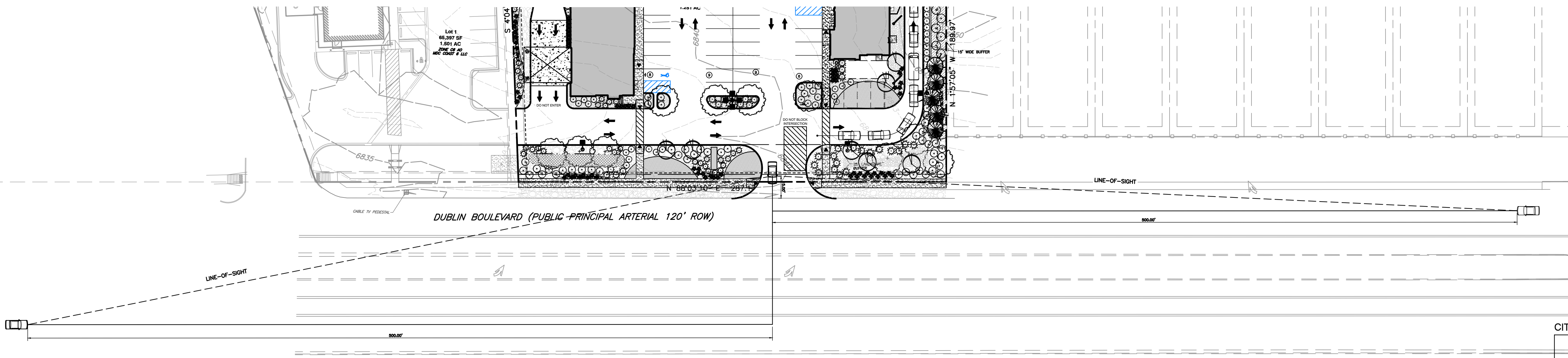


DRAWING NO. C701

SHEET 11 OF 17

## ENTRANCE SITE DISTANCE EXHIBIT

SCALE: 1"= 40'-0"





\\bar-gw\unl\projects\1310-2001\311-7981-C000\DWG\001-TITLE (Owner)\311798-C001-C700.dwg(Notes) 15/11/2020 8:12 AM - LP: 1/25/2020 8:12 AM

LANDSCAPE SPECIFICATIONS:

PART 1 – GENERAL

1.01 RELATED DOCUMENTS:

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING CONDITIONS, SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.02 SUMMARY:

A. THIS SECTION INCLUDES THE FOLLOWING:

1. TREES, SHRUBS, AND GROUNDCOVERS
2. EXCAVATING AND BACKFILLING FOR TREES, SHRUBS & GROUNDCOVERS
3. REMOVAL OF ALL ROCK ENCOUNTERED WHILE INSTALLING DRAINAGE PITS
4. PLACEMENT OF SATISFACTORY FILL AND TOPSOIL AND FINAL GRADING SHOWN ON DRAWINGS.
5. TOPSOIL AND SOIL AMENDMENTS
6. FERTILIZERS AND MULCHES
7. STAKES AND GUYS
8. INITIAL MAINTENANCE OF LANDSCAPE MATERIALS

B. DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHINGS, TRANSPORTING AND INSTALLING ALL PLANTS OR OTHER MATERIALS REQUIRED FOR:

1. THE ESTABLISHMENT OF LANDSCAPE PLANTINGS COMMUNITY
2. POST-PLANTING MAINTENANCE UNTIL RELEASED BY THE OWNER. AN INSPECTION WILL BE CONDUCTED WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION. THE OWNER RESERVES THE RIGHT TO WITHHOLD THE FINAL 10% OF CONTRACT AMOUNT UNTIL FINAL ACCEPTANCE INSPECTION FOR A COMPLETE JOB.
3. ALL REMEDIAL OPERATIONS REQUIRED TO FULFILL CONTRACTOR'S OBLIGATIONS OF THESE SPECIFICATIONS, THE PLANS OR AS REASONABLY DIRECTED BY THE OWNER.

4. PROVIDE ALL EXTERIOR PLANTING AS SHOWN ON THE DRAWINGS OR INFERRABLE THEREFROM AND/OR AS SPECIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

5. THESE SPECIFICATIONS INCLUDE STANDARDS NECESSARY FOR AND INCIDENTAL TO THE EXECUTION AND COMPLETION OF PLANTING, INCLUDING HAULING AND SPREADING OF TOPSOIL, AND FINISHED GRADING AS INDICATED ON THE PREPARED DRAWINGS AND SPECIFIED HEREIN.

6. PROTECTION OF EXISTING FEATURES, DURING CONSTRUCTION, PROTECT ALL EXISTING TREES, SHRUBS, AND OTHER SPECIFIED VEGETATION, SITE FEATURES AND IMPROVEMENTS, STRUCTURES, AND UTILITIES SPECIFIED HEREIN AND/OR ON SUBMITTED DRAWINGS. REMOVAL OR DESTRUCTION OF EXISTING PLANTINGS IS PROHIBITED UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER.

1.03 APPLICABLE STANDARDS:

A. AMERICAN NATIONAL STANDARDS FOR TREES CARE OPERATIONS, ANSI A300.

B. AMERICAN NATIONAL STANDARDS INSTITUTE, 11 W 42ND ST, NEW YORK, NY 10036.

C. AMERICAN STANDARD OF NURSERY STOCK, ANSI Z60.1, AMERICAN NURSERY AND LANDSCAPE ASSOCIATION, 1250 EYE ST, NW SUITE 500, WASHINGTON D.C. 20005.

D. HORTUS THRU THE STAFF IF THE L.H. BAILEY HORTORIUM, 1976 MACMILLAN PUBLISHING CO, NEW YORK.

E. ALL STANDARDS SHALL INCLUDE THE LATEST ADDITIONS AND AMENDMENTS AS OF THE DATE THE CONTRACT DOCUMENTS.

1.04 SUBMITTALS: SUBMIT THE FOLLOWING UNLESS DIRECTED OTHERWISE BY LANDSCAPE ARCHITECT OR OWNER:

A. GENERAL: SUBMIT EACH ITEM IN THIS ARTICLE ACCORDING TO THE CONDITIONS OF THE CONTRACT SPECIFICATION SECTIONS.

B. PRODUCT CERTIFICATES SIGNED BY MANUFACTURERS CERTIFYING THAT THEIR PRODUCTS COMPLY WITH SPECIFIED REQUIREMENTS.

1. MANUFACTURER'S CERTIFIED ANALYSIS FOR STANDARD PRODUCTS.

2. ANALYSIS FOR OTHER MATERIALS BY A RECOGNIZED LABORATORY MADE ACCORDING TO METHODS ESTABLISHED BY THE ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, WHERE APPLICABLE.

3. LABEL DATA SUBSTANTIATING THAT PLANTS, TREES, SHRUBS, AND PLANT MATERIALS COMPLY WITH SPECIFIED REQUIREMENTS.

C. QUALIFICATION DATA FOR FIRMS AND PERSONS SPECIFIED IN THE "QUALITY ASSURANCE" ARTICLE TO DEMONSTRATE THEIR CAPABILITIES AND EXPERIENCE. INCLUDE LISTS OF COMPLETED PROJECTS WITH NAMES AND ADDRESSES, NAMES AND ADDRESSES OF ARCHITECTS AND OWNERS, AND OTHER INFORMATION SPECIFIED.

D. SUBMIT NAME OF WHOLESALE NURSERY SOURCE FOR PLANTS WITHIN BID PACKAGE. INCLUDE NURSERY PHONE NUMBERS SO THAT AVAILABILITY CAN BE CHECKED. CONTRACTOR MAY BE REQUIRED TO PROVIDE UPDATED PLANT SOURCE INFORMATION AS REQUIRED BY RECOGNIZED SOURCES WITH SIMILAR SOIL TYPES AND CLIMATE ARE DESIRABLE. SOURCES SOUTH OF THE USDA ZONE 5 WILL NOT BE ACCEPTED.

E. PLANTING SCHEDULE INDICATING ANTICIPATED DATES AND LOCATIONS FOR EACH TYPE OF PLANTING.

F. MAINTENANCE INSTRUCTIONS RECOMMENDING PROCEDURES TO BE ESTABLISHED BY OWNER FOR MAINTENANCE OF LANDSCAPING DURING AN ENTIRE YEAR. SUBMIT BEFORE EXPIRATION OF REQUIRED MAINTENANCE PERIODS.

1.05 QUALITY ASSURANCE:

A. INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER WHO HAS COMPLETED LANDSCAPING WORK SIMILAR IN MATERIAL, DESIGN AND EXTENT TO THAT INITIATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL LANDSCAPE ESTABLISHMENT.

1. INSTALLER'S FIELD SUPERVISION: REQUIRE INSTALLER TO MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR ON THE PROJECT SITE DURING TIMES THAT LANDSCAPING IS IN PROGRESS.

B. SOURCE QUALITY CONTROL:

1. GENERAL: A CERTIFICATE OF NURSERY INSPECTION FROM EACH STATE DEPARTMENT OF AGRICULTURE FROM WHICH PLANTS ORIGINATE AND/OR A DATES, CURRENT YEAR INDIANA DEPARTMENT OF NATURAL RESOURCES NURSERY DEALER CERTIFICATE. THE NURSERY MUST VERIFY WHETHER OR NOT THEY ARE UNDER A CYPRIS MOTH COMPLIANCE AGREEMENT BETWEEN DNR AND THE U.S.D.A. OR UNDER AN MA JAPANESE BEETLE QUARANTINE. ALL PLANT MATERIAL SHIPPED FROM NURSERY VENDORS SUBJECT TO QUARANTINES MUST BE ACCOMPANIED BY A 1897 CERTIFICATE OF COMPLIANCE FOR CYPRIS MOTH AND/OR JAPANESE BEETLE. TO DETERMINE IF VENDORS ARE SUBJECT TO QUARANTINES, CALL DNR SUPERVISOR OF PLANT REGULATORY SERVICES.

2. PROVIDE QUALITY, SIZE, GENUS, SPECIES AND VARIETY OF TREES AND SHRUBS INDICATED, COMPLYING WITH APPLICABLE REQUIREMENTS OF ANSI Z60.1 AMERICAN STANDARD FOR NURSERY STOCK. PROVIDE HEALTHY, VIGOROUS STOCK GROWN IN RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND FREE OF DISEASE, INSECTS, EGGS, LARVAE AND DISEASES SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASSIONS OR DISTORTION.

3. DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY TO LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL PRIOR TO BID SUBMITTAL.

4. ANALYSIS AND STANDARDS: PACKAGE STANDARD PRODUCTS WITH MANUFACTURER'S CERTIFIED ANALYSIS. FOR OTHER MATERIALS, PROVIDE ANALYSIS BY RECOGNIZED LABORATORY MADE IN ACCORDANCE WITH METHODS ESTABLISHED BY THE ASSOCIATION OF OFFICIAL AGRICULTURE CHEMISTS, WHEREVER APPLICABLE.

5. INSPECTION: THE LANDSCAPE ARCHITECT/ OWNER MAY INSPECT TREES AND SHRUBS EITHER AT PLACE OF GROWTH OR AT SITE BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE AND QUALITY. ARCHITECT RETAINS RIGHT TO FURTHER INSPECT TREES AND SHRUBS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEMS, INSECTS, INJURIES AND LATENT DEFECTS AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. REMOVE REJECTED TREES OR SHRUBS IMMEDIATELY FROM PROJECT SITE.

C. MEASUREMENTS: MEASURE TREES AND SHRUBS ACCORDING TO ANSI Z60.1 WITH BRANCHES AND TRUNKS OR CANES IN THEIR NORMAL POSITION. DO NOT PRUNE TO OBTAIN REQUIRED SIZES. TAKE CALIPER MEASUREMENTS 6 INCHES ABOVE GROUND FOR TREES UP TO 4 INCHES CALIPER SIZE AND 12 INCHES ABOVE GROUND FOR LARGER SIZES. MEASURE MAIN BODY OF TREE OR SHRUB FOR HEIGHT AND SPREAD; DO NOT MEASURE BRANCHES OR ROOTS TIP-TO-TIP.

1.6 DELIVERY, STORAGE AND HANDLING:

A. PACKAGED MATERIALS: DELIVER PACKAGED MATERIALS IN CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY AND WHILE STORING ON SITE.

B. SOD: HARVEST, DELIVER, STORE AND HANDLE SOD ACCORDING TO THE REQUIREMENTS OF THE AMERICAN SOD PRODUCERS ASSOCIATION'S (ASPA) "SPECIFICATIONS FOR TURFGRASS SOD MATERIALS AND TRANSPORTING/INSTALLING." TIME DELIVERY SO THAT SOD WILL BE PLACED WITHIN 24 HOURS AFTER SHIPPING. PROTECT SOD AGAINST DRYING AND BREAKING OF ROLLED STRIPES.

C. TREES AND SHRUBS: DELIVER FRESHLY DUG TREES AND SHRUBS. DO NOT PRUNE BEFORE DELIVERY. EXCEPT AS APPROVED BY LANDSCAPE ARCHITECT. PROTECT BARK, BRANCHES AND ROOT SYSTEMS FROM SUN-SCALD, SWEATING, WHIPPING AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING DELIVERY. DO NOT DROP TREES OR SHRUBS DURING DELIVERY.

D. HANDLE BALLED AND BURLAPPED AND CONTAINER STOCK BY ROOT BALL.

E. DELIVER TREE, SHRUBS, GROUNDCOVER AND PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND MOISTURE CONTENT AND FINISH GRADE AS INDICATED.

F. SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST. DO NOT DELIVER MORE PLANT MATERIAL THAN CAN BE PLANTED IN ONE DAY. IF PLANTING IS DELAYED MORE THAN 6 HOURS, REEPLY AND REWET.

1. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST OR OTHER ACCEPTABLE MATERIAL.

2. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING.

3. WATER ROOT SYSTEMS OF TREES AND SHRUBS STORED ON SITE WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST CONDITION.

1.07 PROJECT CONDITIONS:

A. UTILITIES: DETERMINE LOCATION OF ABOVE GRADE AND UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID DAMAGE. HAND EXCAVATE, AS REQUIRED, UNTIL PROTECT STAKES UNTIL REMOVAL IS MUTUALLY AGREED UPON BY PARTIES CONCERNED.

B. EXCAVATION: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILLS, ADVERSE DRAINAGE CONDITIONS OR OBSTRUCTIONS, NOTIFY LANDSCAPE ARCHITECT BEFORE PLANTING.

1.08 COORDINATION AND SCHEDULING:

A. PLANTING TIME: PROCEED WITH AND COMPLETE LANDSCAPE WORK AS RAPIDLY AS PORTIONS OF SITE BECOME AVAILABLE, WORKING WITHIN SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.

1. PLANT OR INSTALL MATERIALS ONLY WHEN GROUND AND BACKFILL IS NOT FROZEN.

2. CORRELATE PLANTING WITH SPECIFIED MAINTENANCE PERIODS TO PROVIDE MAINTENANCE FROM DATE OF SUBSTANTIAL COMPLETION.

3. INSTALL PLANT MATERIAL BETWEEN MARCH AND JUNE AND/OR SEPT. AND DEC. (WHICHEVER CONTRACT ALLOWS.)

B. COORDINATION WITH EARTHWORK CONTRACTOR: PLANT TREES AND SHRUBS AFTER FINAL GRADES ARE ESTABLISHED AND PRIOR TO PLANTING LAWNS, UNLESS OTHERWISE ACCEPTABLE TO LANDSCAPE ARCHITECT /OWNER.

1.09 WARRANTY:

A. GENERAL WARRANTY: THE SPECIAL WARRANTY SPECIFIED IN THIS ARTICLE SHALL NOT DEPRIVE THE OWNER OF OTHER RIGHTS THE OWNER MAY HAVE UNDER OTHER PROVISIONS OF THE CONTRACT DOCUMENTS AND SHALL BE IN ADDITION TO, AND RUN CONCURRENT WITH, OTHER WARRANTIES MADE BY CONTRACTOR UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

B. SPECIAL WARRANTY: WARRANT THE FOLLOWING LIVING PLANT MATERIALS FOR A PERIOD OF ONE YEAR AFTER DATE OF FINAL COMPLETION, AGAINST DEFECTS INCLUDING DEATH AND UNDESIRABLE GROWTH, INCLUDING DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLIGENCE OR ABUSE BY OWNER, ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.

1. TREES

2. SHRUBS

3. GROUNDCOVER

4. PLANTS

C. REMOVE AND REPLACE DEAD PLANTING MATERIALS IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON.

D. REPLACE PLANTING MATERIALS THAT ARE MORE THAN 25% DEAD OR IN AN UNHEALTHY CONDITION AT END OF WARRANTY PERIOD.

E. A LIMIT OF ONE REPLACEMENT OF EACH PLANT MATERIAL SHALL BE REQUIRED, EXCEPT FOR LOSSES OR REPLACEMENT DUE TO FAILURE TO COMPLY WITH REQUIREMENTS.

1.10 TREE AND SHRUB MAINTENANCE:

A. MAINTAIN TREES AND SHRUBS TREES AND SHRUBS BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING, RESTORING SAUCERS, TIGHTENING AND REPAIRING STAKES AND GUY SUPPORTS, AND RESETTLE TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO ESTABLISH HEALTHY, VIGILANT PLANTINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF PESTS AND DISEASE. RESTORE OR REPLACE DAMAGED TREE WRAPPINGS. MAINTAIN TREES AND SHRUBS FOR THE FOLLOWING PERIOD:

1. MAINTENANCE PERIOD: 12 MONTHS FOLLOWING SUBSTANTIAL COMPLETION. MAINTENANCE SHOULD OCCUR ON A SEMI-MONTHLY BASIS.

1.11 GROUNDCOVER AND PLANT MAINTENANCE:

A. MAINTAIN GROUNDCOVER AND PLANTS BY WATERING, WEEDING, FERTILIZING, AND OTHER OPERATIONS AS REQUIRED TO ESTABLISH HEALTHY, VIGILANT PLANTINGS FOR THE FOLLOWING PERIOD:

1. MAINTENANCE PERIOD: 12 MONTHS FOLLOWING SUBSTANTIAL COMPLETION. MAINTENANCE SHOULD OCCUR ON A SEMI-MONTHLY BASIS. WATERING SHALL BE COORDINATED WITH OWNER.

PART 2 – PRODUCTS

2.01 PLANTS:

A. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY-GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO YEARS. THEY SHALL HAVE BEEN FRESHLY DUG (DURING THE MOST RECENT FAVORABLE HARVEST SEASON).

1. ALL PLANTS NAMES AND DESCRIPTIONS SHALL AS BE DEFINED IN HORTUS THRID.

2. ALL PLANTS SHALL BE GROWN AND HARVESTED IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK.

3. UNLESS APPROVED BY THE LANDSCAPE ARCHITECT, PLANTS SHALL HAVE BEEN GROWN AT A LATITUDE NOT MORE THAN 200 MILES NORTH OF SOUTH OF THE LATITUDE OF THE PROJECT UNLESS THE PROVENANCE OF THE PLANT CAN BE DOCUMENTED TO BE COMPATIBLE WITH THE LATITUDE AND COLD HARDINESS ZONE OF THE PLANTING LOCATION.

B. UNLESS SPECIFICALLY NOTED, ALL PLANTS SHALL BE OF SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, SYMMETRICAL AND SO TRAINED OR FAVORED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY AND OUTSTANDINGLY SUPERIOR IN FORM OF COMPACTNESS AND SYMMETRY. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN THE LEAF; FREE OF DISEASE AND INSECTS, EGGS, LARVAE, AND SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT VIGOROUS GROWTH.

1. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED, WILL BE REJECTED. TREES WITH A DAMAGED OR CROOKED LEADER, BARK ABRASSIONS, SUN-SCALD, DISTURBING KNOTS, INSECT DAMAGE, OR CUTS OF LIMBS THAT MEASUREMENTS SHALL BE LESS THAN 1/8" IN DIAMETER THAT ARE NOT COMPLETELY CLOSED WILL BE REJECTED.

C. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED, EXCEPT THAT PLANTS LARGER THAN THOSE SPECIFIED MAY BE USED IF APPROVED BY THE LANDSCAPE ARCHITECT. USE OF LARGER PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. IF LARGER PLANTS ARE APPROVED, THE ROOT BALL SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

1. CALIPER MEASUREMENTS SHALL BE TAKEN ON THE TRUNK 6" ABOVE THE NATURAL GROUND LINE FOR TREES UP TO AND INCLUDING 4" IN CALIPER, AND 12" ABOVE THE NATURAL GROUND LINE FOR TREES OVER 4" IN CALIPER. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO BRANCH TIP. PLANTS SHALL BE MEASURED WHEN BRANCHES ARE IN THEIR NORMAL POSITION. IF A RANG OF SIZES IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE, AND NO LESS THAN 50% IF THE PLANTS SHALL BE AS LARGE AS THE MAXIMUM SIZE SPECIFIED. MEASUREMENTS SPECIFIED ARE MINIMUM SIZES ACCEPTABLE AFTER PRUNING. WHEN PRUNING IS REQUIRED, THE MEASUREMENTS SHALL BE MEASUREMENTS BUT DO NOT POSSESS A STANDARD RELATIONSHIP BETWEEN HEIGHT AND SPREAD, ACCORDING TO THE AMERICAN STANDARD FOR NURSERY STOCK, SHALL BE REJECTED.

D. SUBSTITUTIONS OF PLANT MATERIALS WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT. IF PROOF IS SUBMITTED IN WRITING THAT A PLANT SPECIFIED IS NOT OBTAINABLE, CONSIDERATION WILL BE GIVEN TO THE NEAREST AVAILABLE SIZE OR SIMILAR VARIETY, WITH A CORRESPONDING ADJUSTMENT OF THE CONTRACT PRICE.

E. THE PLANT LIST AT THE SEND ON THE CONTRACT DOCUMENTS IS FOR CONTRACTOR'S INFORMATION ONLY, AND NO GUARANTEE IS EXPRESSED OR IMPLIED THAT QUANTITIES THEREIN ARE CORRECT OR THAT THE LIST IS COMPLETE. THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS SHOWN ON THE DRAWINGS ARE INCLUDED IN HIS OR HER BID.

F. ALL PLANTS SHALL BE LABELED BY PLANT NAME. LABELS SHALL BE ATTACHED SECURELY TO ALL PLANTS, AND CONTAINERS OR PLANT MATERIALS WHEN DELIVERED. PLANT LABELS SHALL BE DURABLE AND LEGIBLE, WITH INFORMATION GIVEN IN WEATHER-RESISTANT INK OR EMBOSSED PROCESS LETTERING.

G. SELECTION AND TAGGING:

1. PLANTS SHALL BE SUBJECT TO INSPECTION FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AND APPROVAL BY THE LANDSCAPE ARCHITECT AT THEIR PLACE OF GROWTH AND UPON DELIVERY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.

2. A WRITTEN REQUEST FOR THE INSPECTION OF PLANT MATERIAL AT THEIR PLACE OF GROWTH SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT AT LEAST 10 CALENDAR DAYS PRIOR TO DIGGING. THE LANDSCAPE ARCHITECT MAY REFUSE INSPECTION AT THIS TIME IF SUFFICIENT QUANTITIES OF PLANTS ARE NOT AVAILABLE FOR INSPECTION.

3. ALL FIELD GROWN DECIDUOUS TREES SHALL BE MARKED TO INDICATE THE TREES NORTH ORIENTATION IN THE NURSERY. PLACE A 1" DIAMETER SPOT OF WHITE PAINT ON THE NORTH SIDE OF THE TRUNK WITHIN THE BOTTOM 12 INCHES OF THE TRUNK.

H. ANTI-DESICCANTS:

1. ANTI-DESICCANTS, IF SPECIFIED, ARE TO BE APPLIES TO PLANTS IN FULL LEAF IMMEDIATELY BEFORE DIGGING OR AS REQUIRED BY THE LANDSCAPE ARCHITECT. ANTI-DESICCANTS ARE TO BE SPRAYED SO THAT LEAVES AND BRANCHES ARE COVERED WITH A CONTINUOUS PROTECTIVE FILM.

2. ANTI-DESICCANTS: SHALL BE AN EMULSION SPECIFICALLY MANUFACTURED FOR AGRICULTURAL USE, WHICH PROVIDES A PROTECTIVE FILM OVER PLANT SURFACES. ANTI-DESICCANTS SHALL BE DELIVERED IN CONTAINERS OF THE MANUFACTURER'S DIRECTIONS. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.

I. BALLED AND BURLAPPED (B&B) PLANT MATERIALS:

1. TREES DESIGNATED B&B SHALL BE PROPERLY DIG WITH FIRM, NATURAL BALLS OF SOIL RETAINING AS MANY FIBROUS ROOTS AS POSSIBLE, IN SIZE AND SHAPE AS SPECIFIED IN THE AMERICAN STANDARD FOR NURSERY STOCK. BALLS SHALL BE FIRMLY WRAPPED WITH NON-SYNTHETIC, ROTTABLE BURLAP AND SECURED WITH NAILS AND HEAVY NON-SYNTHETIC ROTTABLE TWINE. THE ROOT COLLAR SHALL BE APPARENT AT SURFACE OF BALL. TREES WITH LOOSE, BROKEN, PROCESSED, OR MANUFACTURED ROOT BALLS WILL NOT BE ACCEPTABLE, EXCEPT WITH SPECIAL WRITTEN APPROVAL BEFORE PLANTING.

J. CONTAINER PLANTS:

1. PLANTS GROWN IN CONTAINERS SHALL BE APPROPRIATE SIZE FOR THE CONTAINERS AS SPECIFIED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND BE FREE OF CIRCLING ROOTS ON THE EXTERIOR AND INTERIOR OF THE ROOT BALL.

2. CONTAINER PLANTS SHALL HAVE BEEN GROWN IN THE CONTAINER LONG ENOUGH TO HAVE ESTABLISHED ROOTS THROUGHOUT THE GROWING MEDIUM.

K. BAREROT AND COLLECTED PLANTS:

1. PLANTS DESIGNATED AS BAREROT OR COLLECTED PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK.

2. BAREROT MATERIAL SHALL NOT BE DUG OR INSTALLED AFTER BUD BREAK OR BEFORE DORMANCY.

L. IMMEDIATELY AFTER HARVESTING PLANTS, PROTECT FROM DRYING AND DAMAGE UNTIL SHIPPED AND DELIVERED TO THE PLANTING SITE. ROOTBALLS SHALL BE CHECKED REGULARLY AND WATERED SUFFICIENTLY TO MAINTAIN ROOT VIABILITY.

M. TRANSPORTATION AND STORAGE OF PLANT MATERIAL:

1. BRANCHES SHALL BE TIED WITH ROPE OR TWINE ONLY, AND IN SUCH MANNER THAT NO DAMAGE WILL OCCUR TO THE BARK OR BRANCHES.

2. DURING TRANSPORTATION OF PLANT MATERIAL, THE CONTRACTOR SHALL EXERCISE CARE TO PREVENT INJURY AND DRYING OUT OF THE TREES, SHOULD THE ROOTS BE DRIED OUT, LARGE BRANCHES BROKEN, BALLS OF EARTH BROKEN OR LOOSENED, OR AREA OF BARK TORN, THE LANDSCAPE ARCHITECT MAY REJECT THE INJURED MATERIALS AND ORDER THEM REPLACED AT NO ADDITIONAL COST TO THE OWNER. ALL LOADS OF PLANTS SHALL BE COVERED AT ALL TIMES WITH TARPS OR CANVAS. LOADS THAT ARE NOT PROTECTED WILL BE REJECTED.

3. ALL BAREROT STOCK SENT FROM THE STORAGE FACILITY SHALL BE ADEQUATELY COVERED WITH WET SOIL, SAWDUST, WOODCHIPS, MOSS, PEAT, STRAW, HAY OR OTHER ACCEPTABLE MOISTURE-HOLDING MEDIUM, AND SHALL BE COVERED WITH A TARP OR CANVAS. LOADS THAT ARE NOT PROTECTED IN THE ABOVE MANNER MAY BE REJECTED.

4. PLANTS MUST BE PROTECTED AT ALL TIMES FROM SUN OR DRYING WINDS. THOSE THAT CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH SOIL, WET MULCH OR OTHER ACCEPTABLE MATERIAL, AND KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED ANY LONGER THAN 3 DAYS AFTER DELIVERY. PLANTS SHALL BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE LIFTED AND HANDLED WITH SUITABLE SUPPORT OF THE SOIL BALL TO AVOID DAMAGING IT.

N. MECHANIZED TREE SPADE REQUIREMENTS:

1. TREES MAY BE MOVED AND PLANTED WITH AN APPROVED MECHANICAL TREE SPADE. THE TREE SPADE SHALL MOVE TREES LIMITED TO THE MAXIMUM SIZE FOR A SIMILAR B&B ROOTBALL DIAMETER ACCORDING TO THE AMERICAN STANDARD FOR NURSERY STOCK OR THE MANUFACTURER'S MAXIMUM SIZE RECOMMENDATION FOR THE TREE SPADE BEING USED, WHICHEVER IS SMALLER.

THE MACHINE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO USE. TREES SHALL BE PLANTED AT THE DESIGNATED LOCATIONS IN THE MANNER SHOWN IN THE PLAN AND IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE SPECIFICATIONS.

2.02 TREE AND SHRUB MATERIAL:

A. GENERAL: FURNISH NURSERY-GROWN TREES AND SHRUBS CONFORMING TO ANSI Z60.1, WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALE, INJURIES, ABRASSIONS AND DISFIGUREMENT.

1. SOIL BALLS SHALL NOT BE BROKEN OR LOOSE, IF, WHEN PULLED, THE STEM OR CROWN MOVES AND THE BALL DOES NOT, THE PLANT WILL BE REJECTED.

2. THE ROOT PLATE SHOULD BE AT THE SOIL LINE ON TOP OF THE BALL. THE PLANT WAS PLANTED TOO DEEP IF YOU SEE THE ROOT PLATE DEEPER INSIDE THE BALL WITH MOST OF THE ROOTS NEAR THE BOTTOM. IF THE UPPERMOST ROOTS ARE MORE THAN 4 INCHES BELOW THE TOP OF THE SOIL BALL, THE PLANT WILL BE REJECTED.

3. MEASURE THE WIDTH AND DEPTH OF THE ROOT PLANT. ROOT SYSTEMS MUST BE IN THE BALANCE WITH THE TOP OF THE PLANT. THE ROOTS MUST BE OF SUFFICIENT SIZE TO SUPPORT THE TOP OF THE PLANT.

4. PLANTS MUST HAVE A BALANCED ROOT SYSTEM THAT IS WELL DISTRIBUTED AND NOT ONE-SIDED, CIRCLING OR GIRDLING.

5. BUDS ON PLANTS (IF VISIBLE) SHOULD BE FULL, MOIST AND GREEN INSIDE WHEN SPLIT APART.

6. TREES MUST HAVE A DEFINED CENTRAL LEADER WITH A MINIMUM OF EIGHT BRANCHES RADIATING TO ALL SIDES OF THE TREE. THE TREE IS ACCEPTABLE IF IT CAN BE PRUNED TO A CENTRAL LEADER.

7. CONTAINER PLANTS ARE TO GROW IN CONTAINERS FOR A MINIMUM 90 DAYS PRIOR TO DELIVERY.

8. ROOT MUST FILL THE SOIL BALL OF THE CONTAINER GROWN PLANTS.

9. ROOT BOUND PLANTS WILL BE REJECTED.

B. GRADE: PROVIDE TREES AND SHRUBS OF SIZES AND GRADES CONFORMING TO ANSI Z60.1 FOR TYPE OF TREES AND SHRUBS REQUIRED. TREES AND SHRUBS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO LANDSCAPE ARCHITECT, WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS.

1. IN SIZE GRADING B&B TREES, CALIPER SHALL TAKE PRECEDENCE OVER HEIGHT, WHERE A MINIMUM AND MAXIMUM SIZE (I.E. SIZE RANGE) IS SPECIFIED THE AVERAGE OF THE LOT SHOULD APPROXIMATE THE MIDPOINT OF THE SPECIFIED SIZE RANGES.

C. LABEL: ALL TREES AND SHRUBS OF EACH VARIETY, SIZE AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.

2.03 SHADE AND FLOWERING TREES:

A. SHADE TREES: SINGLE-STEM TREES WITH STRAIGHT TRUNK, WELL-BALANCED CROWN, AND INTACT LEADER, OF HEIGHT AND CALIPER INDICATED, CONFORMING TO ANSI Z60.1 FOR TYPE OF TREES REQUIRED.

1. BRANCHING HEIGHT: AS INDICATED IN PARAGRAPH 2.4C.

2. MULTI-STEM OR CLUMP FORMS WITH 3 MAIN TRUNKS SHALL BE PROVIDED WHEN SPECIFIED.

B. SMALL TREES: SMALL UPRIGHT OR SPREADING TYPE, BRANCHED OR PRUNED NATURALLY ACCORDING TO SPECIES AND TYPE, AND WITH RELATIONSHIP OF CALIPER, HEIGHT, AND BRANCHING RECOMMENDED BY ANSI Z60.1, AND STEM FORM AS FOLLOWS:

1. FORM: SINGLE STEM.

2. FORM: MULTI-STEM, CLUMP WITH 2 OR MORE STEMS.

3. FORM: MULTI-STEM, SHRUB, WITH MULTIPLE STEMS

C. PROVIDE BALLED AND BURLAPPED TREES.

2.04 DECIDUOUS SHRUBS:

A. FORM AND SIZE: DECIDUOUS SHRUBS WITH NOT LESS THAN THE MINIMUM NUMBER OF CANES REQUIRED BY AND MEASURED ACCORDING TO ANSI Z60.1, FOR TYPE, SHAPE, AND HEIGHT OF SHRUB.

B. PROVIDE BALLED AND BURLAPPED DECIDUOUS SHRUBS.

1. CONTAINER-GROWN DECIDUOUS SHRUBS WILL BE ACCEPTABLE IN LIEU OF BALLED AND BURLAPPED DECIDUOUS SHRUBS SUBJECT TO MEETING ANSI Z60.1 LIMITATIONS FOR CONTAINER STOCK.

2.05 GROUNDCOVERS AND PLANTS:

A. PROVIDE GROUNDCOVERS AND PLANTS ESTABLISHED AND WELL ROOTED IN REMOVABLE CONTAINERS OR INTERIOR PLANTING BEDS NOT LESS THAN THE MINIMUM NUMBER AND LENGTH OF RUNNERS REQUIRED BY ANSI Z60.1 FOR THE POT SIZE INDICATED.

2.06 GRASS –SEEDING AND SODDING:

A. SOD: CERTIFIED TURFGRASS SOD COMPLYING WITH ASPA SPECIFICATIONS FOR TURFGRASS. SOD THICKNESS, SIZE, STRENGTH, MOISTURE CONTENT, AND MOWED HEIGHT, AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES, PROVIDE VIABLE SOD OF UNIFORM DENSITY, COLOR, AND TEXTURE, STRONGLY ROOTED, AND CAPABLE OF VIGOROUS AND DEVELOPMENT WHEN PLANTED.

B. SEED: SEED MIXTURE "R" AS DESCRIBED IN SECTION 621.06 OF THE 1999 INDOT STANDARD SPECIFICATIONS SECTION 621.06 (A).

C. MULCH: MULCH METHOD A OR B AS DESCRIBED IN SECTION 621.05 OF 1999 INDOT STANDARD SPECIFICATIONS SECTION 621.06 (C).

2.07 FILL MATERIAL:

A. SATISFACTORY FILL MATERIALS: ASTM D2487 SOIL CLASSIFICATION GROUPS GQ,GP,GM,SW,SP AND SM; FREE OF ROCK OR GRAVEL LARGER THAN 2 INCHES IN ANY DIMENSION, DEBRIS, WATER, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATERIAL.

B. TOPSOIL: PROVIDE TOPSOIL THAT IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLE FREE OF SUBSOIL, CLAY, LIMBS, BRUSH, WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 1 INCH IN ANY DIMENSION, AND OTHER EXTRANEUOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. TOPSOIL SHALL CONTAIN A MINIMUM 2% ORGANIC MATTER.

1. TOPSOIL SOURCE: IMPORT TOPSOIL FROM OFF-SITE SOURCES. OBTAIN TOPSOIL FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP; DO NOT OBTAIN FROM BOGS OR MARSHES.

C. DRAINAGE FILL: WASHED EVENLY GRADED MIXTURE OF CRUSHED STONE WITH 100% PASSING A 1-1/2" SIEVE, AND NOT MORE THAN 5% PASSING A NO. 8 SIEVE.







IRRIGATION SPECIFICATIONS

GENERAL

- A. QUALIFICATIONS OF IRRIGATION CONTRACTOR
1. ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE IRRIGATION CONTRACTING FIRM SPECIALIZING IN IRRIGATION SYSTEMS. SEE THE IRRIGATION PLAN FOR SPECIFIC EQUIPMENT AND SYSTEM LAYOUT.
  2. THE IRRIGATION CONTRACTOR MUST HAVE ON ITS STAFF A LICENSED IRRIGATION INSTALLER, AS REGULATED BY THE APPROPRIATE LOCAL JURISDICTION. A LICENSED IRRIGATION INSTALLER SHALL BE PRESENT AT THE PROJECT SITE AT ALL TIMES AS WORK IS IN PROGRESS. THE OWNER MAY DEMAND THAT WORK STOP IF THE CONTRACTOR PROVIDES FOR A LICENSED IRRIGATION INSTALLER TO BE PRESENT AT THE PROJECT SITE AND SUPERVISING ALL IRRIGATION WORK.
  3. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
- B. SCOPE OF WORK
1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES, FEES, AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK SPECIFIED HEREIN AND/OR SHOWN ON THE DRAWINGS, NOTES, AND DETAILS.
  2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS. IN CASE OF CONFLICT BETWEEN THESE PLANS AND LOCAL AND/OR STATE CODES, CODES SHALL PREVAIL.
  3. THE INTENT OF THE IRRIGATION SYSTEM IS TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS. THE IRRIGATION PLAN IS GENERALLY DIAGRAMMATIC; COORDINATE IRRIGATION INSTALLATION WITH UTILITY LOCATIONS. ACTUAL LOCATION OF CONTROLLER, BACKFLOW DEVICE, PIPING, VALVES, SPRAY HEADS, DRIP IRRIGATION, AND RELATED EQUIPMENT MAY NEED TO BE ADJUSTED BASED ON ACTUAL SITE CONDITIONS.
  4. FOR CLARITY PURPOSES, SOME IRRIGATION LINES AND EQUIPMENT ARE SHOWN IN HANDSCAPE AREAS WITHOUT ACCESS SLEEVES. THESE LINES SHALL BE INSTALLED IN A COMMON TRENCH OR AT THE BACK OF CURB IN LANDSCAPE AREAS. MINOR FIELD ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

PRODUCTS

- A. ALL MATERIALS SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS OF ANY TYPE AND SHALL BE THE BEST OF THEIR CLASS AND KIND. ALL MATERIALS SHALL HAVE A MINIMUM GUARANTEE OF ONE YEAR AGAINST MATERIAL DEFECTS OR DEFECTIVE WORKMANSHIP. ALL MATERIALS SHALL BE OF THE BRANDS AND TYPES NOTED ON THE DRAWINGS OR AS SPECIFIED HEREIN, OR APPROVED EQUAL. THE CONTRACTOR MUST FIRST OBTAIN APPROVAL FROM THE IRRIGATION DESIGNER FOR AN APPROVED EQUAL BEFORE INSTALLING SUCH MATERIALS IN THE FIELD. OR THE CONTRACTOR MAY BE REQUIRED TO REPLACE SUCH MATERIALS AT HIS OWN COST.
- B. BACKFLOW PREVENTION DEVICES SHALL BE OF THE SIZE AND TYPE INDICATED ON THE DRAWINGS. INSTALL BACKFLOW PREVENTION UNITS IN ACCORDANCE WITH IRRIGATION CONSTRUCTION DETAILS AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
- C. PIPING
1. PRESSURE SUPPLY LINES, DOWNSTREAM OF THE POINT-OF-CONNECTION:
    - a. SCHEDULE 40 PVC FOR ALL PIPE 1-1/2" OR LESS
    - b. CLASS 315 PVC FOR ALL PIPE 2" TO 2-1/2"
    - c. CLASS 200 PVC, GASKETED, FOR ALL PIPE 3" AND LARGER
  2. SLEEVING AND NON-PRESSURE LATERAL LINES (DOWNSTREAM FROM VALVES); CLASS 200 PVC
  3. FITTINGS: SCH. 40 PVC, EXCEPT AS NOTED OTHERWISE.
- D. VALVES AND DRIP VALVE ASSEMBLIES: TYPE AND SIZE AS NOTED ON PLANS. EACH VALVE SHALL BEAR A PRE-MANUFACTURED, NUMBERED WATERPROOF TAG BEARING A NUMBER CORRESPONDING TO ITS VALVE SEQUENCE OF OPERATION ON THE CONTROLLER. THE OPERATION SEQUENCE SHALL MATCH THAT AS SHOWN ON THE PLANS.
- E. QUICK COUPLERS, BALL VALVES, AND GATE VALVES: TYPE AND SIZE PER PLANS.
- F. VALVE BOXES: TYPE AND SIZE AS NOTED ON DETAILS. ALL VALVE BOXES SHALL BE LOCKING BOLT-DOWN TYPE, FURNISHED WITH LIDS AND BOLTS. BOXES SHALL BE OF A SIZE TO CONTAIN THE ENTIRE VALVE AND/OR VALVE ASSEMBLY. THE VALVE BOX LID SHALL HAVE THE VALVE STATION NUMBER HEAT-BRANDED INTO THE LID WITH 2" HIGH LETTERS.
- G. FIXED SPRAY HEADS AND ROTORS: PLASTIC BODY POP-UP, WITH A REMOVABLE PLASTIC SPRAY NOZZLE. EXACT TYPE, MODEL, AND NOZZLE SHALL BE AS INDICATED ON PLANS.
- H. INTEGRAL EMITTER DRIP IRRIGATION: TUBING MODEL AND FLOW RATE AS NOTED ON PLANS, WITH INTEGRAL EMITTERS WELDED TO THE INSIDE WALL OF THE TUBING AS AN INTEGRAL PART OF THE TUBING ASSEMBLY.
- I. AUTOMATIC CONTROLLER: TYPE AND MODEL PER PLANS. PROVIDE VANDAL-PROOF ENCLOSURE FOR ALL EXTERIOR INSTALLATIONS. PROVIDE LINE-VOLTAGE DISCONNECT SWITCH WITH GROUND FAULT PROTECTION.
- J. 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR IRRIGATION WIRE. EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR STATION AND COMMON WIRE.
1. STATION WIRE - ANY COLOR EXCEPT WHITE OR BLUE
  2. COMMON WIRE - WHITE
  3. EXTRA COMMON WIRES - BLUE
- K. WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF COMPOUND OR GEL. ALL FIELD SPLICES SHALL BE LOCATED IN A 5 INCH ROUND VALVE BOX.
- L. RAIN SENSOR: TYPE AND MODEL PER PLANS.

METHODS

- A. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN PLANTING AREAS WITHIN THE PROPERTY LINES OR LIMITS INDICATED ON PLAN. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQUIRED TO MOVE SUCH ITEMS AT HIS OWN COST. ENSURE FIELD COORDINATION IS MADE EARLY ON IN THE CONSTRUCTION PHASE SO PLACEMENT LOCATION IS CORRECT.
- B. THE IRRIGATION CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK, AND SHALL OBTAIN ALL ENGINEERING, LANDSCAPE, AND OTHER APPLICABLE PLANS & DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE PLANS AND REPORT ANY CONFLICTS OR DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE IMMEDIATELY.
- C. THE IRRIGATION CONTRACTOR SHALL NOT WILFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADES OR DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE IRRIGATION DESIGNER. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS AND NECESSARY COSTS. THE IRRIGATION CONTRACTOR SHALL COORDINATE AND PAY FOR THE INSTALLATION OF THE IRRIGATION TAP AND METER.
- D. THE IRRIGATION CONTRACTOR SHALL PAY ANY AND ALL FEES AND PERMITS ASSOCIATED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.
- F. AT LEAST SEVEN DAYS BEFORE BEGINNING WORK, CONFIRM THE STATIC WATER PRESSURE IS AT LEAST 55 PSI AND LESS THAN 70 PSI. IF STATIC WATER PRESSURE IS OUTSIDE OF THE STATED RANGE, DO NOT PROCEED WITHOUT FIRST NOTIFYING THE IRRIGATION DESIGNER AND OWNER IN WRITING, AND OBTAINING SUBSEQUENT DIRECTION FOR CORRECTIONAL MEASURES. SHOULD THE IRRIGATION CONTRACTOR CHOOSE TO BEGIN THE INSTALLATION WITHOUT SUCH NOTIFICATION, THE IRRIGATION CONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR ALL COSTS INCURRED TO ENSURE THE SYSTEM IS WORKING PROPERLY. NO CHANGE ORDERS WILL BE AUTHORIZED IN SUCH CIRCUMSTANCES.
- G. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, STRUCTURES AND UTILITIES.
- H. COORDINATE WITH THE OWNER THE PROPOSED LOCATIONS OF THE AUTOMATIC CONTROLLER AND ANY REQUIRED SLEEVES THROUGH THE BUILDING FOR CONTROL WIRES.
- I. TRENCING NEAR EXISTING TREES:
1. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1" FOR EVERY 1" OF TRUNK DIAMETER AT-BREAST-HEIGHT (4.5 ABOVE THE AVERAGE GRADE AT THE TRUNK).
  2. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
  3. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
  4. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PATCHES.

BACKFILL

1. ALL BACKFILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE OWNER. BACKFILL MATERIAL SHALL BE FREE FROM RUBBISH, ROCK LARGER THAN 1", LARGE STONES, BRUSH, SOIL, FROZEN MATERIAL, OR OTHER UNSUITABLE SUBSTANCES THAT MAY DAMAGE PIPE DURING THE BACKFILLING OPERATIONS. SEPARATE OUT ROCKS LARGER THAN 1 INCH IN ANY DIRECTION FROM EXCAVATED MATERIAL, AND REMOVE FROM AREAS TO RECEIVE LANDSCAPE COVER FOR BOTH TOP AND SIDES OF PIPE SHALL BE A MINIMUM OF 2 INCHES OF ROCK-FREE SOIL, SAND, OR OTHER APPROVED MATERIAL.
2. IN THE EVENT THAT THE MATERIAL FROM THE EXCAVATION OR TRENCING IS FOUND TO BE UNSUITABLE FOR USE IN BACKFILL, IT SHALL BE REMOVED FROM THE SITE AND PROPERLY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL THEN PURCHASE AND FURNISH SUITABLE BACKFILL MATERIAL, CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND OR OTHER APPROVED MATERIALS FREE OF DEBRIS.

BACKFLOW PREVENTER INSTALLATION

- CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER SOURCES AT LOCATION SHOWN ON PLANS AND AS APPROVED BY THE OWNER, AND SHALL MAKE ANY MINOR CHANGES IN LOCATION AS MAY BE NECESSARY DUE TO ACTUAL SITE CONDITIONS. BACKFLOW PREVENTER HEIGHT SHALL BE AS PER LOCAL CODES AND IRRIGATION DETAILS. INSTALL A BRASS BALL VALVE IMMEDIATELY UPSTREAM OF THE BACKFLOW DEVICE TO SERVE AS AN ISOLATION VALVE. TO EVERY EXTENT POSSIBLE, INSTALL BACKFLOW PREVENTER (OR A LOCATION SCREENED FROM PUBLIC VIEW (SUCH AS BEHIND A SHRUB ROW)).
- PIPING
1. PIPE SIZE SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS FOR LARGER SIZES MAY BE APPROVED.
  2. MAINLINE PIPE AND WIRES SHALL BE INSTALLED WITH A MINIMUM COVER OF 24 INCHES. LATERAL PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 18 INCHES.
  3. ASSEMBLE ALL THREADED FITTINGS WITH TEFLON TAPE, WHICH SHALL BE APPLIED TO MALE THREADS ONLY.
  4. ALL SOLVENT-WELD CONNECTIONS SHALL BE MADE WITH APPROVED SOLVENT-WELD PRIMER AND GLUE.
  5. PIPE SHALL BE INSTALLED WITH A MINIMUM OF 4" HORIZONTAL CLEARANCE FROM ANY OTHER PIPE AND 2" VERTICAL CLEARANCE FROM ANY PIPES THAT CROSS OVER OR UNDER.

VALVES

1. VALVES SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND THE IRRIGATION DETAILS.
2. VALVE BOXES SHALL BE INSTALLED FLUSH WITH THE GRADE, WITH CLEAN PEA GRAVEL LOCATED BELOW THE VALVE AS NOTED ON THE DETAILS. LOCATE BOXES WITHIN 12 TO 24" OF SIDEWALKS OR LANDSCAPE EDGES, WITH TOPS OF BOXES 1" ABOVE FINISH GRADE IN TURF, AND 3" ABOVE FINISH GRADE IN SHRUB AREAS (TO AVOID BEING COVERED BY MULCH).
3. EACH VALVE BOX COVER SHALL BE HEAT-BRANDED WITH THE CONTROLLER STATION NUMBER.
4. DO NOT INSTALL MORE THAN TWO VALVES IN A JUMBO BOX.

DRIP IRRIGATION EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND THE IRRIGATION DETAILS.

1. SUBSURFACE DRIP LINES SHALL BE BURIED NO MORE THAN 2" BELOW FINISH GRADE.
  2. SPICERS MOUNTED ON GRADE SHALL BE LOCATED BENEATH THE BACKFLOW DEVICE, AND SECURED IN PLACE WITH WIRE STAPLES AT A MAXIMUM OF 48" ON CENTER.
- SPRAY, ROTOR, AND BUBBLER HEADS
1. ALL SPRAY AND ROTOR HEAD LOCATIONS SHALL BE STAKED, FLAGGED AND/OR OTHERWISE CLEARLY MARKED ON THE GROUND PRIOR TO INSTALLATION. SPRINKLER HEAD STAKING SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
  2. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12 INCH MINIMUM LENGTH OF 1 INCH FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #788 SOLVENT AND #P-10 PRIMER. ALL ROTORS SHALL BE CONNECTED TO LATERAL LINES WITH PRE-MANUFACTURED SWING JOINTS.
  3. ALL ROTOR, SPRAY AND BUBBLER HEADS SHALL BE SET PERPENDICULAR AND FLUSH TO FINISH GRADE AND WITH A CLEARANCE OF FOUR INCHES FROM THE EDGE OF ANY BUILDINGS, WALLS, BOULDERS, AND HANDSCAPE, UNLESS OTHERWISE SPECIFIED.
  4. ALL ROTOR, SPRAY AND BUBBLER HEADS AND VALVES SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ON WALKS, STREETS, ETC.

AUTOMATIC CONTROLLER

1. INSTALL THE CONTROLLER AT THE LOCATION INDICATED BY THE OWNER. INSTALL CONTROLLER WITH A BACKUP BATTERY AS RECOMMENDED BY THE MANUFACTURER.
2. THE IRRIGATION CONTRACTOR SHALL COORDINATE 120 V.A.C. ELECTRICAL POWER TO CONTROLLERS AND DEDICATE ONE (1) 20-AMP BREAKER FOR EACH CONTROLLER. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SOURCE TO THE CONTROLLER UNIT ONLY.
3. ALL VALVE CONTROL WIRE SHALL BE AWG 14 TYPE UF, 600 VOLT TEST, DIRECT BURIAL. NO SPLICES SHALL BE ALLOWED EXCEPT AT VALVES AND CONTROLLER. WHERE SPLICES MAY BE NECESSARY DUE TO EXCESSIVELY LONG WIRE RUNS, THE CONTRACTOR SHALL MAKE ALL SPLICES IN 6" ROUND VALVE BOXES WITH 3MS "DBY-DIRECT BURIAL SPLICE KIT". THE CONTRACTOR SHALL LABEL ALL WIRES WITH WATERPROOF TAGS AND MARKERS AT ALL SPLICES AND VALVE MANIFOLDS, AND SHALL LEAVE A 2" COIL OF EXCESS WIRE AT EACH CONNECTION.
4. PROVIDE #14 COMMON WIRE, DIRECT BURIAL, TO ALL REMOTE CONTROL VALVES.
5. CONNECT ALL DIRECT BURIAL WIRES TO VALVES USING 3MS "DBY-DIRECT BURIAL SPLICE KIT" (UNLESS OTHERWISE SPECIFIED).
6. PROVIDE THREE ADDITIONAL IRRIGATION CONTROL WIRES ALONG EACH BRANCH OF MAINLINE FOR FUTURE EXPANSION. STUB ADDITIONAL CONTROL WIRES INTO BACK OF IRRIGATION CONTROLLERS.
7. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRE SLEEVES AND PIPE SLEEVES UNDER PAVED AREAS PRIOR TO PAVING - SEE SLEEVING NOTES.

INSTALL THE RAIN SENSOR IN THE VICINITY OF THE CONTROLLER, AND COORDINATE LOCATION WITH THE OWNER. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THE RAIN SENSOR IS PLACED IN A LOCATION WHERE IT CAN RECEIVE ADEQUATE RAINFALL WITHOUT OBSTRUCTIONS. IF IT IS PLACED IN AN INADEQUATE LOCATION, THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO RELOCATE IT AT NO ADDITIONAL COST TO THE OWNER.

ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

QUALITY CONTROL

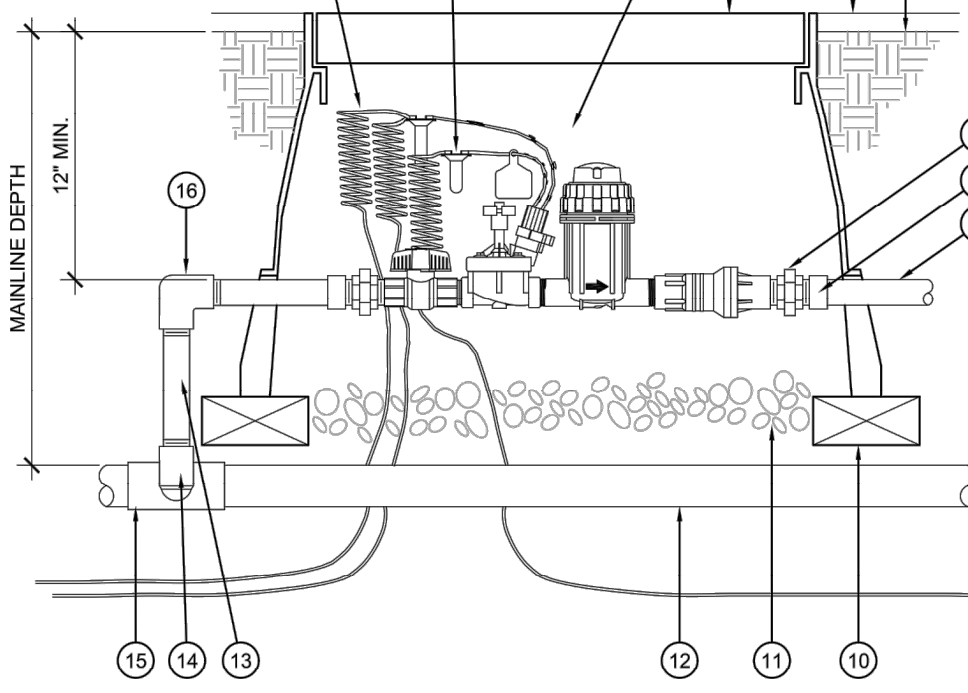
1. PERFORM PERFORMANCE TESTS AFTER IRRIGATION SYSTEM IS COMPLETED, BUT PRIOR TO ANY PLANTING AND PERFORM TESTING IN THE PRESENCE OF THE IRRIGATION DESIGNER AND THE CONSTRUCTION MANAGER.
  2. TEST SYSTEM TO ASSURE THAT ALL LAWN AND PLANTING AREAS ARE WATERED COMPLETELY AND UNIFORMLY.
  3. MAKE ALL NECESSARY ADJUSTMENTS TO PROVIDE COMPLETE COVERAGE, INCLUDING REALIGNMENT OF HEADS AND REPLACEMENT OF NOZZLES.
- CLEAN UP
1. DURING IRRIGATION EXCAVATION AND INSTALLATION, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
  2. DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.
- INSPECTION AND ACCEPTANCE
1. UPON COMPLETION OF THE WORK, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE IRRIGATION CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
  2. WHEN THE INSPECTED WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
  3. THE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.
  4. CONTROLLER CHART: THE IRRIGATION CONTRACTOR SHALL PROVIDE A 11" x 17" COLOR-CODED, LAMINATED COPY OF THE IRRIGATION LAYOUT AND PLACE IT IN THE CONTROLLER'S COVER. THE CONTROLLER CHART SHALL CLEARLY DELINEATE THE AREAS COVERED BY EACH VALVE, USING A SEPARATE COLOR FOR EACH ZONE.
  5. TURN THE FOLLOWING ITEMS IN TO THE OWNER UPON COMPLETION OF THE INSTALLATION:
    - a. QUICK COUPLER KEYS (2)
    - b. CONTROLLER MANUAL (1)
    - c. CONTROLLER KEYS (2)
    - d. A MINIMUM OF (2) COPIES OF RECORD DRAWINGS. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.

REFER TO THE PLANTING SPECIFICATIONS FOR ADDITIONAL CONDITIONS OF FINAL ACCEPTANCE AND START OF THE MAINTENANCE PERIOD.

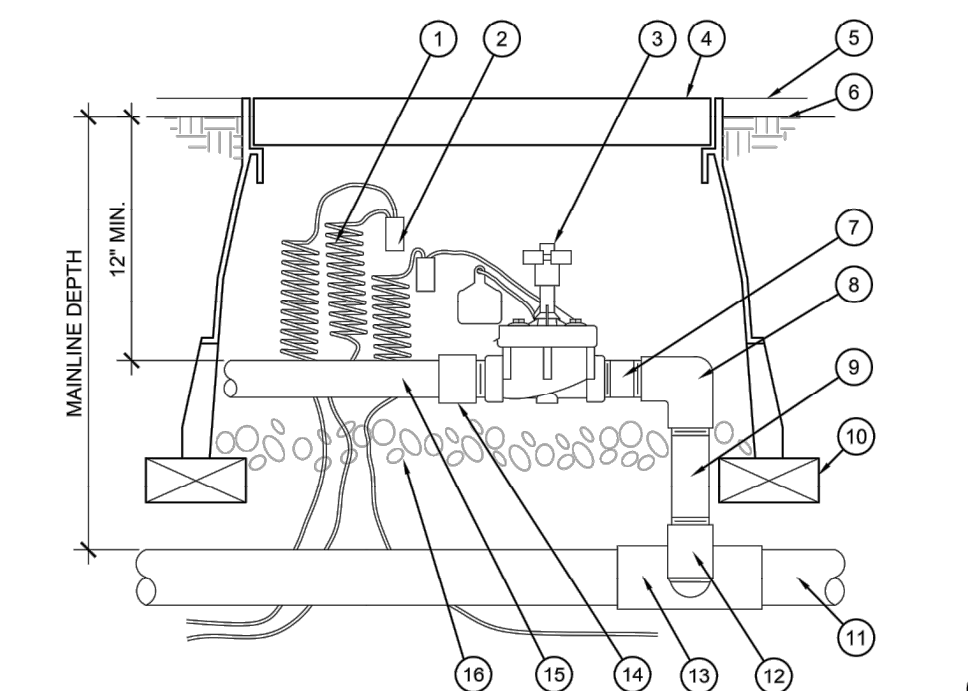
WARRANTY

1. THE IRRIGATION SYSTEM SUPPLIED AND INSTALLED SHALL BE WARRANTED (LABOR AND MATERIALS) TO REMAIN OPERATIONAL FOR A PERIOD OF 12 MONTHS AFTER THE DATE OF FINAL ACCEPTANCE. DURING THIS PERIOD, THE CONTRACTOR SHALL ALSO REPAIR ANY SETTLEMENT OF THE IRRIGATION TRENCHES.
2. BY THE END OF THE WARRANTY PERIOD, ANY IRRIGATION PART THAT IS EITHER NON-OPERATING OR THAT IS OPERATING BELOW STANDARDS DETERMINED BY THE OWNER, SHALL BE REMOVED FROM THE SITE AND SHALL BE REPLACED. REPLACEMENTS SHALL BE OF THE SAME KIND AS SPECIFIED IN THE IRRIGATION LEGEND, AND SHALL BE INSTALLED AS ORIGINALLY SPECIFIED.
3. IRRIGATION PARTS DAMAGED OR IMPAIRED DUE TO ACTS OF GOD, VANDALISM, AND/OR THE OWNER'S IMPROPER MAINTENANCE SHALL NOT BE COVERED BY THIS WARRANTY.

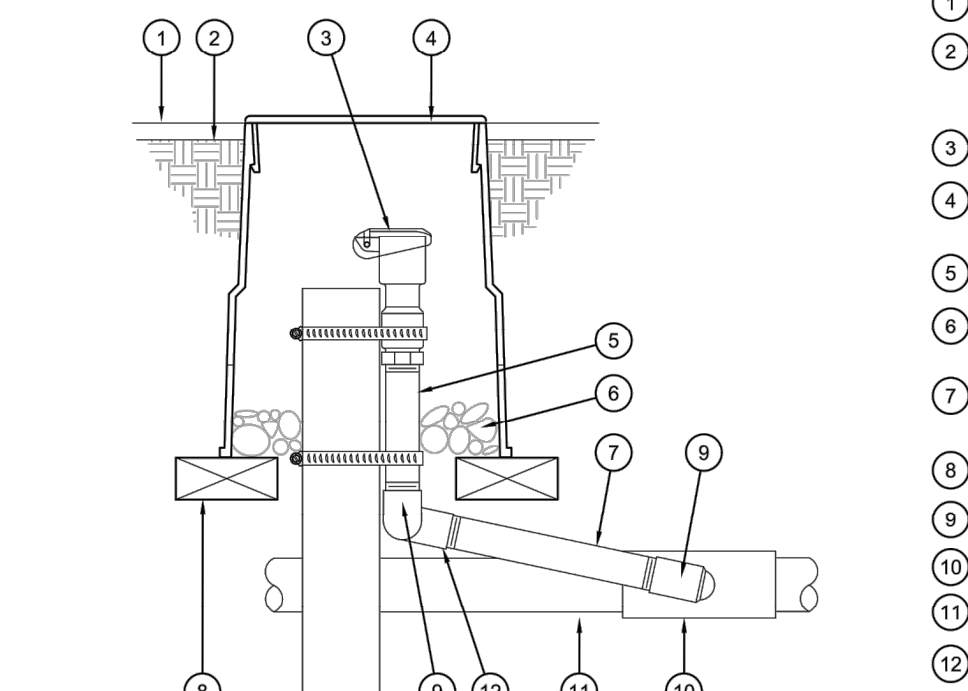
SHOULD THE PERTINENT JURISDICTION REQUIRE AN IRRIGATION AUDIT, THE IRRIGATION CONTRACTOR SHALL RETAIN THE SERVICES OF A THIRD-PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR, AT NO ADDITIONAL COST TO THE OWNER.



D DRIP CONTROL ZONE KIT  
SCALE: NTS

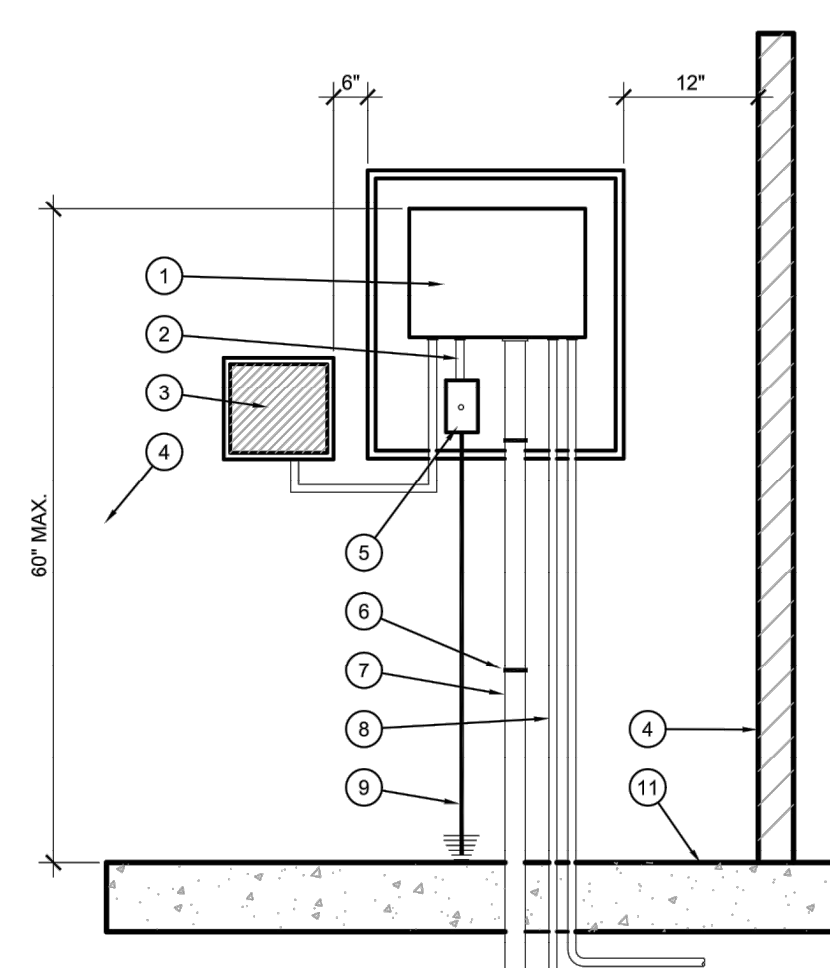


E REMOTE CONTROL VALVE  
SCALE: NTS



F QUICK COUPLER  
SCALE: NTS

- 1 30-INCH LINEAR LENGTH OF WIRE, COILED
- 2 WATERPROOF CONNECTION (ANY APPROVED)
- 3 REMOTE CONTROL VALVE ASSEMBLY
- 4 JUMBO PLASTIC VALVE BOX BY CARSON (OR EQUAL)
- 5 TOP OF MULCH
- 6 FINISHED GRADE-1" BELOW TOP OF BOX IN TURF AREAS, 2" IN SHRUB AREAS
- 7 PVC UNION (2)
- 8 PVC SCH 40 MALE ADAPTER (2)
- 9 PVC LATERAL PIPE
- 10 BRICK (1 OF 4)
- 11 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 12 PVC MAINLINE PIPE
- 13 PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- 14 SCH. 40 PVC ELL
- 15 SCH. 40 PVC TEE OR ELL
- 16 SCH. 40 PVC THREADED ELL

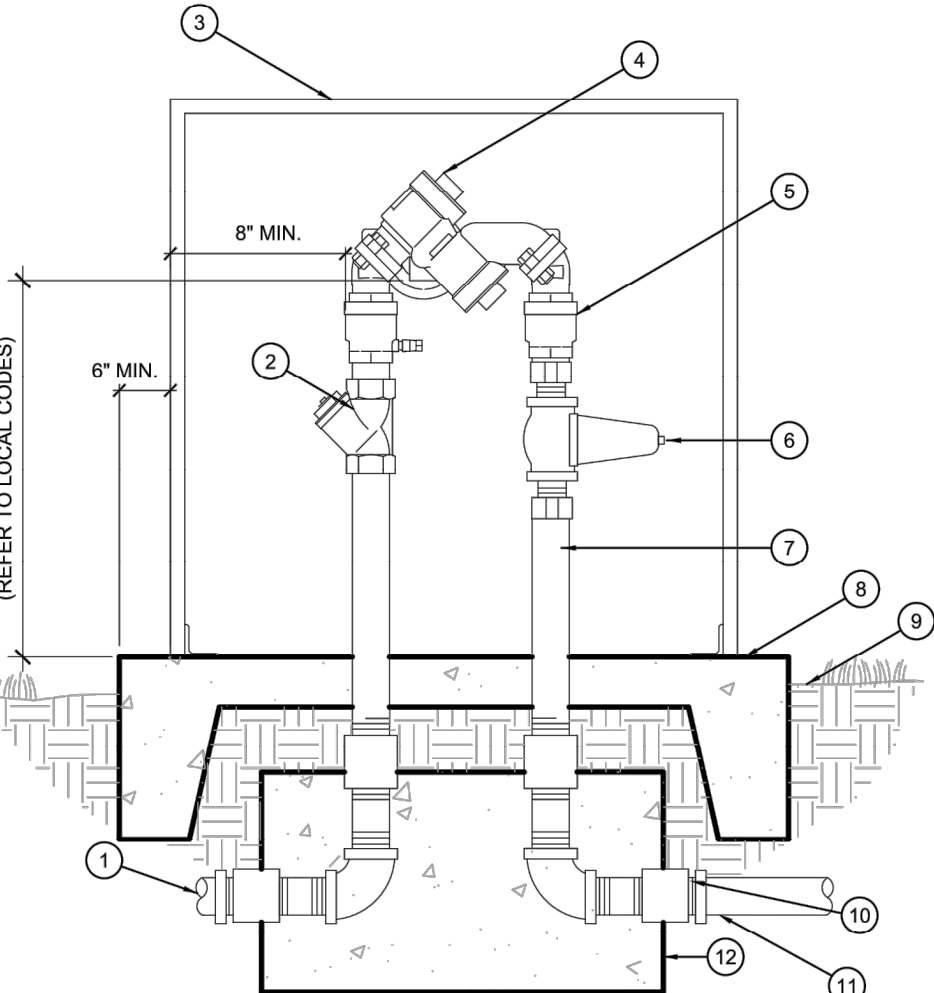


- SECTION
- NOTES:
- 1) MOUNT CONTROLLER AND CABINET PER MANUFACTURER'S DIRECTIONS.
  - 2) 120 V.A.C. POWER PROVIDED BY OTHERS. LANDSCAPE CONTRACTOR SHALL MAKE FINAL CONNECTION AT CONTROLLER. CONNECT TO ELECTRICAL SUPPLY PER NATIONAL ELECTRIC CODE AND LOCAL CODE.
  - 3) LOCATE GROUND ROD 8' MIN. FROM CONTROLLER. VERIFY LOCATION OF GROUND ROD, CONTROLLER AND SOURCE OF ELECTRICITY WITH MANUFACTURER'S REPRESENTATIVE AND OWNER AS PART OF PRE CONSTRUCTION MEETING.

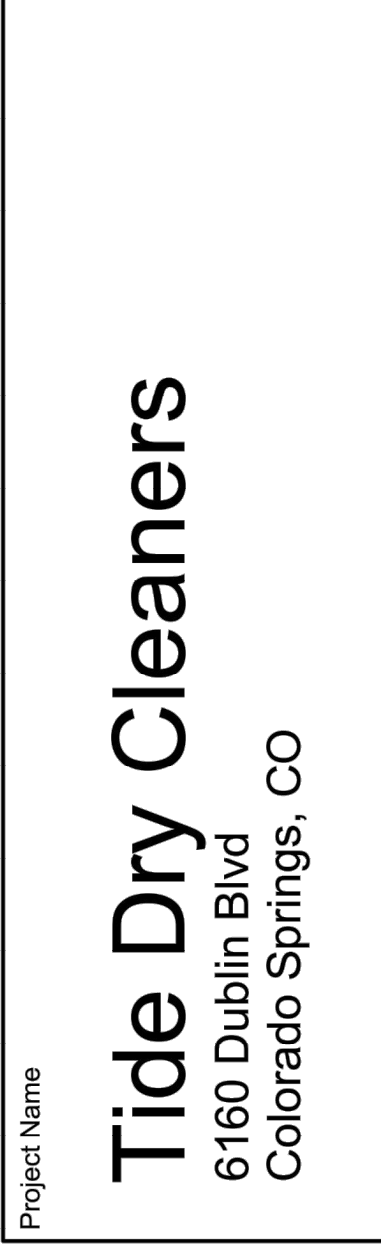
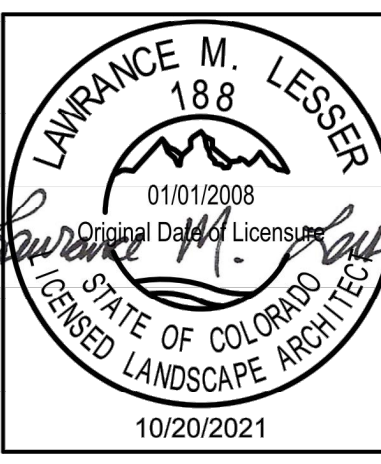
A CONTROLLER - WALL MOUNT, INDOOR  
SCALE: NTS

- 1 30-INCH LINEAR LENGTH OF WIRE, COILED
- 2 WATERPROOF CONNECTION (ANY APPROVED)
- 3 REMOTE CONTROL VALVE
- 4 JUMBO PLASTIC VALVE BOX BY CARSON (OR EQUAL)
- 5 TOP OF MULCH
- 6 FINISHED GRADE-1" BELOW TOP OF BOX IN TURF AREAS, 2" IN SHRUB AREAS
- 7 PVC SCH 80 NIPPLE (CLOSE)
- 8 PVC SCH 40 ELL
- 9 PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- 10 BRICK (1 OF 4)
- 11 PVC MAINLINE PIPE
- 12 SCH. 40 PVC ELL
- 13 PVC SCH 40 TEE OR ELL
- 14 PVC SCH 40 MALE ADAPTER
- 15 PVC LATERAL PIPE
- 16 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 1 PARAPET OR EAVE
- 2 AUTOMATIC RAIN SENSOR - INSTALL PER MANUFACTURER'S INSTRUCTIONS

B RAIN SENSOR, ROOF MOUNT  
SCALE: NTS



C BACKFLOW PREVENTER, REDUCED PRESSURE  
SCALE: NTS



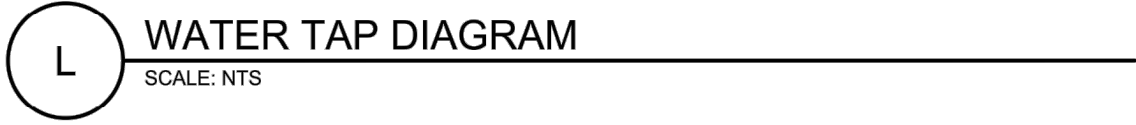
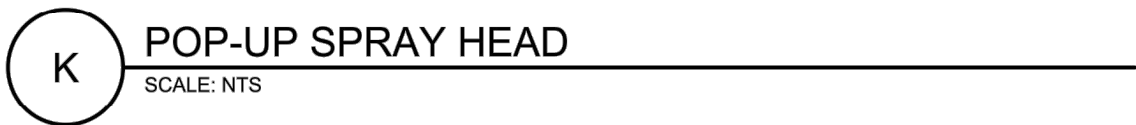
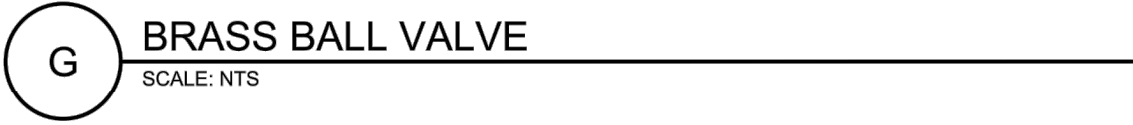
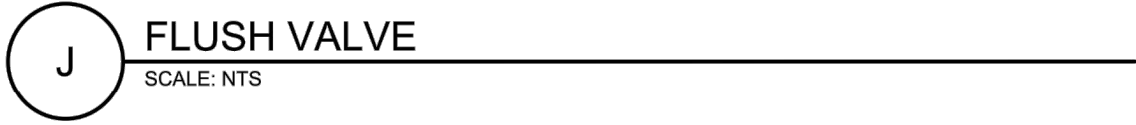
Irrigation Details and Specifications

Date	Comment

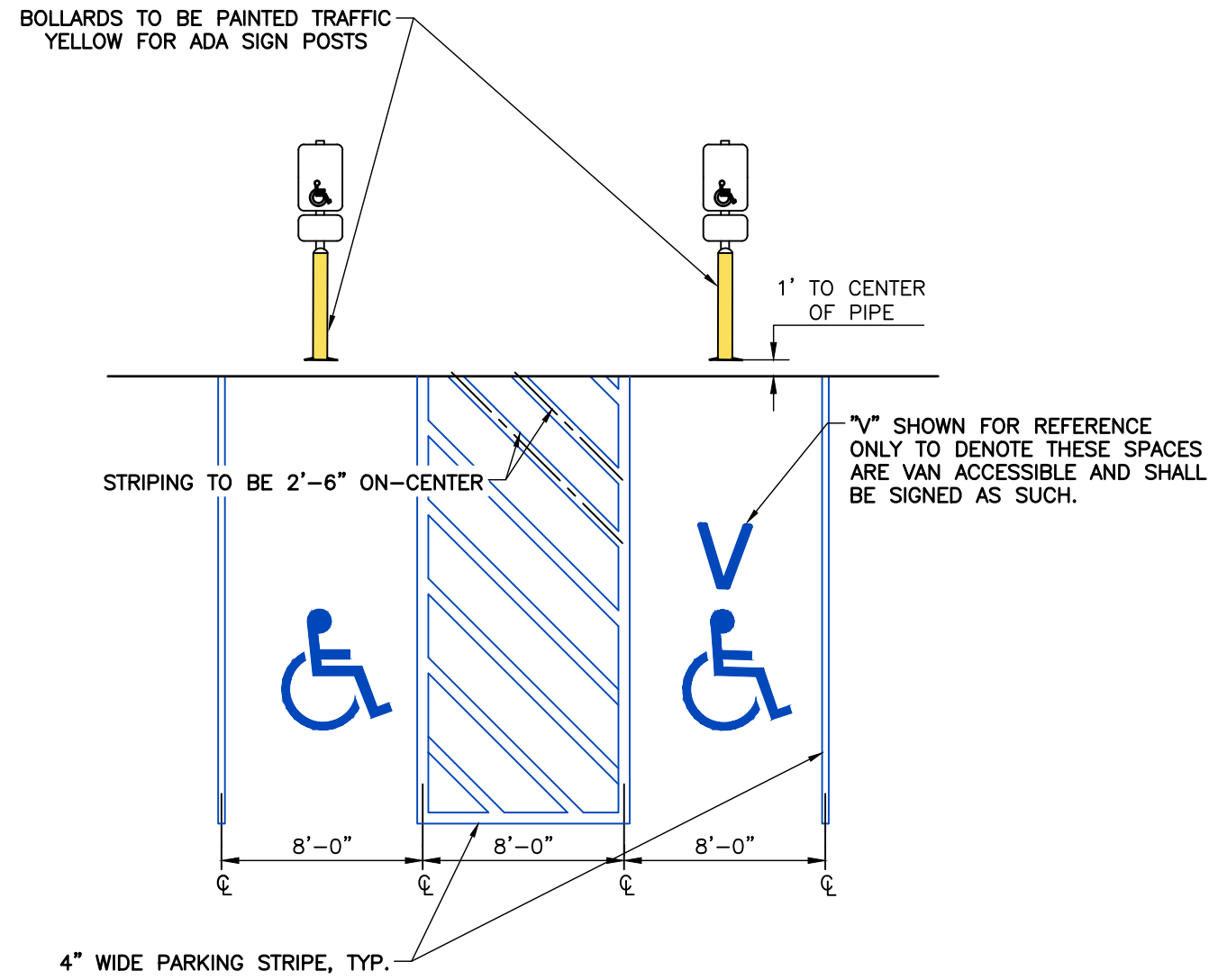
Project Number	
Date	10/20/2021
Drawn By	LML
Checked By	LML/RM

L12



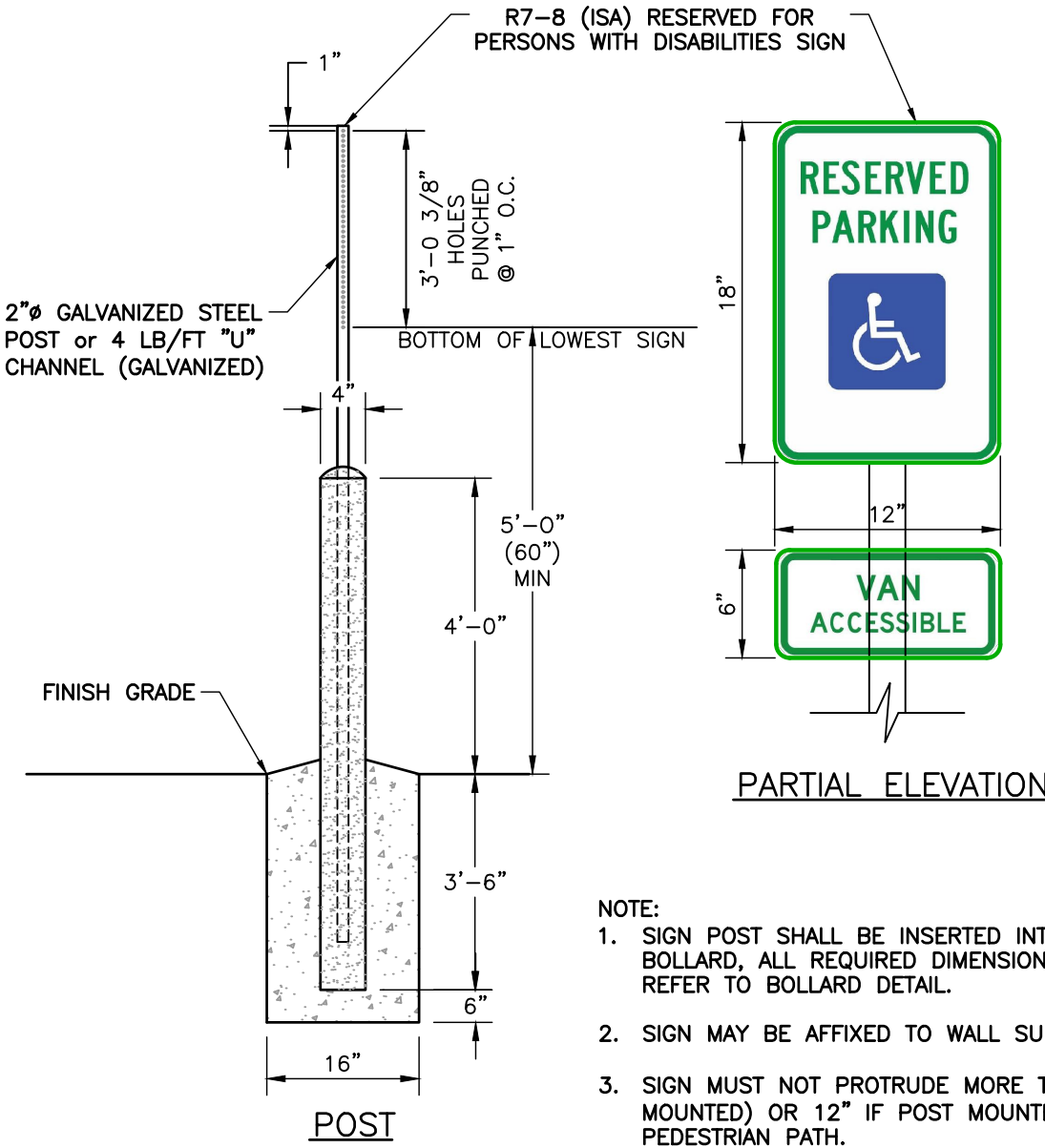






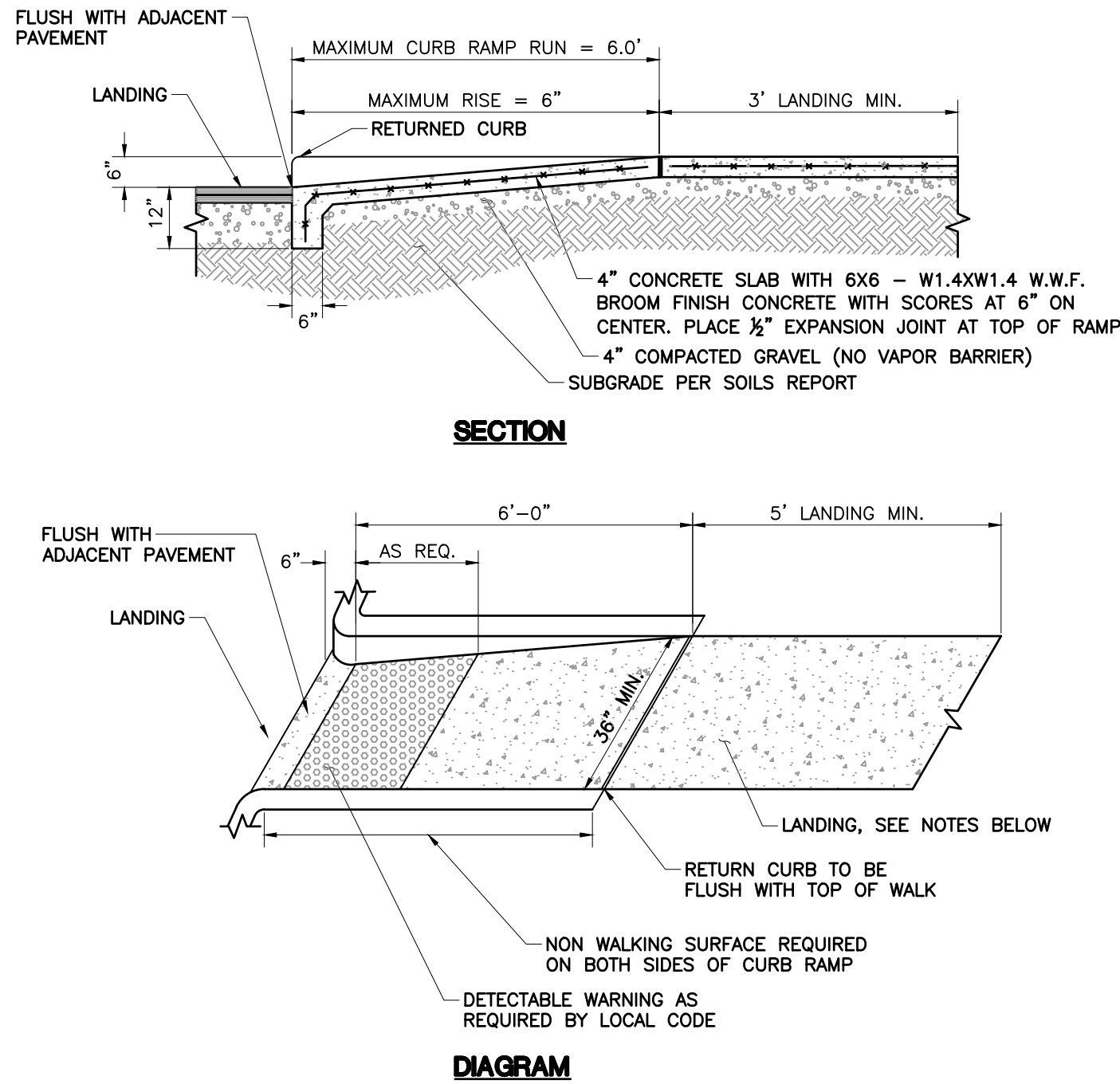
- NOTES:**
- ALL STRIPING FOR ADA ACCESSIBLE PARKING STALLS AND ACCESS AISLES SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
  - ALL ADA PARKING STALL STRIPING, CROSSHATCH, AND SYMBOLS SHALL BE PMS 293 (#0047ba Hex Color Code) COLOR BLUE OR SIMILAR WITH PARKING STRIPE GRADE PAINT.

**DETAIL # 01 - ACCESSIBLE PARKING SPACE LAYOUT**  
N.T.S



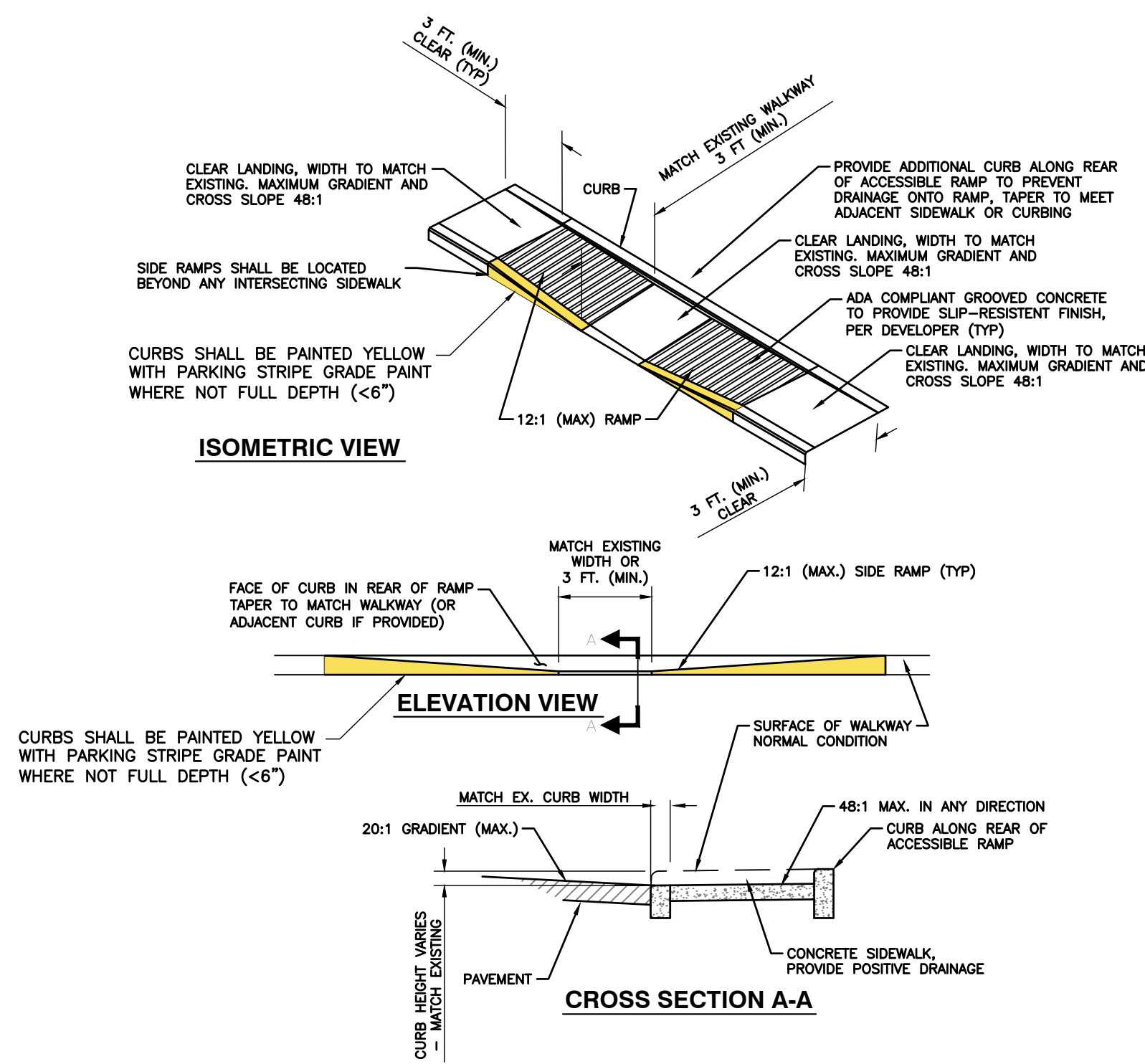
- NOTE:**
- SIGN POST SHALL BE INSERTED INTO 4" TALL STEEL BOLLARD. ALL REQUIRED DIMENSIONS SHALL BE MAINTAINED. REFER TO BOLLARD DETAIL.
  - SIGN MAY BE AFFIXED TO WALL SURFACE.
  - SIGN MUST NOT PROTRUDE MORE THAN 4" (IF WALL MOUNTED) OR 12" IF POST MOUNTED HORIZONTALLY INTO PEDESTRIAN PATH.

**DETAIL # 02 - ACCESSIBLE PARKING SPACE SIGNAGE**  
N.T.S

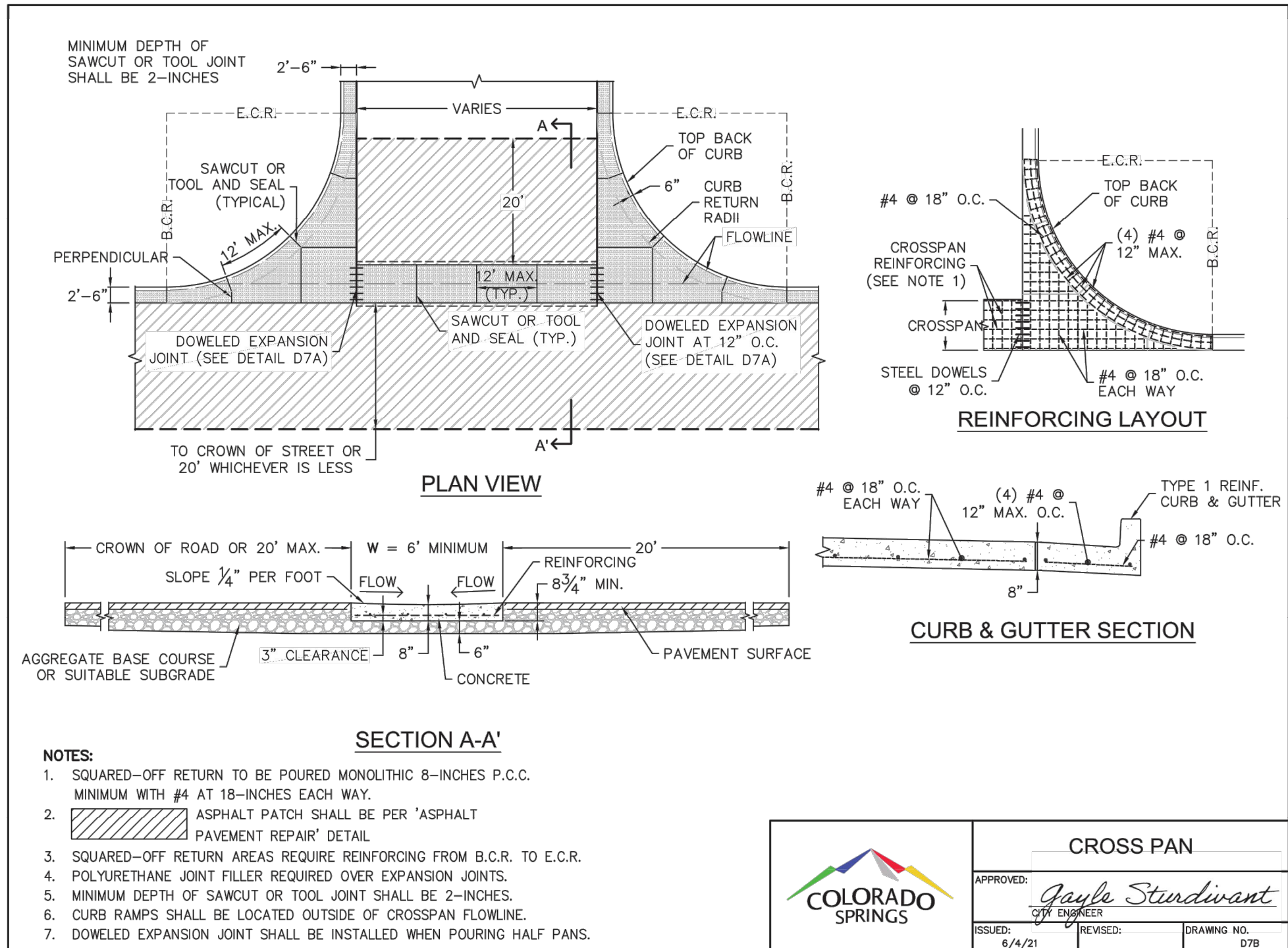


- NOTES:**
- LANDINGS SHALL BE LEVEL (LESS THAN 2% SLOPE IN ALL DIRECTIONS) AND PROVIDED AT THE TOP AND BOTTOM OF ALL ACCESSIBLE RAMPS.
  - LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING.
  - LANDING CLEAR LENGTH SHALL BE 5' LONG MINIMUM.
  - LANDINGS THAT REQUIRE A CHANGE IN DIRECTION BETWEEN RAMP RUNS SHALL HAVE A CLEAR LANDING 60" MINIMUM BY 60" MINIMUM.

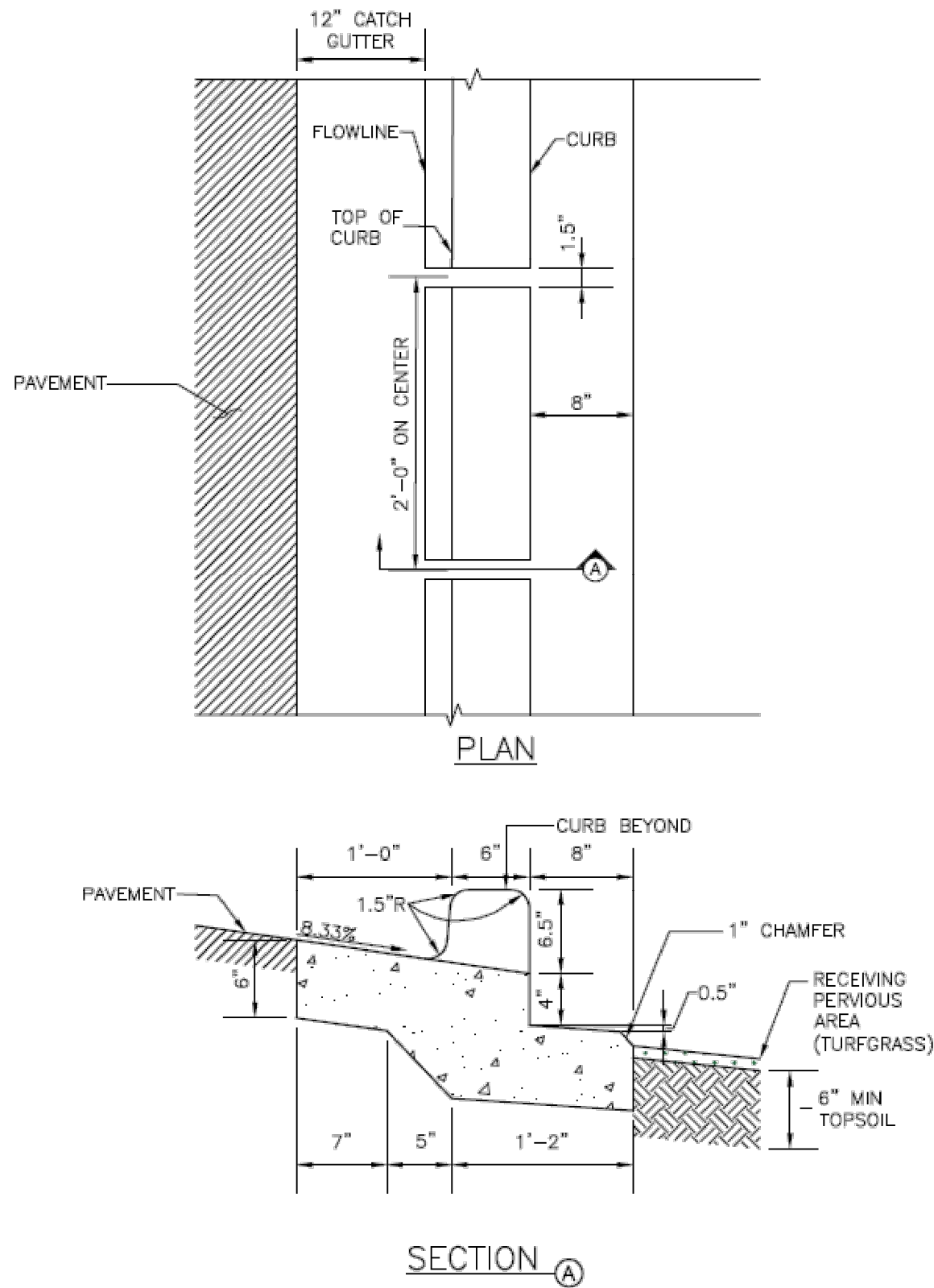
**DETAIL # 03 - ACCESSIBLE CURB RAMP**  
N.T.S



**DETAIL # 04 - ADA DEPRESSED ACCESSIBLE CURB RAMP**  
N.T.S

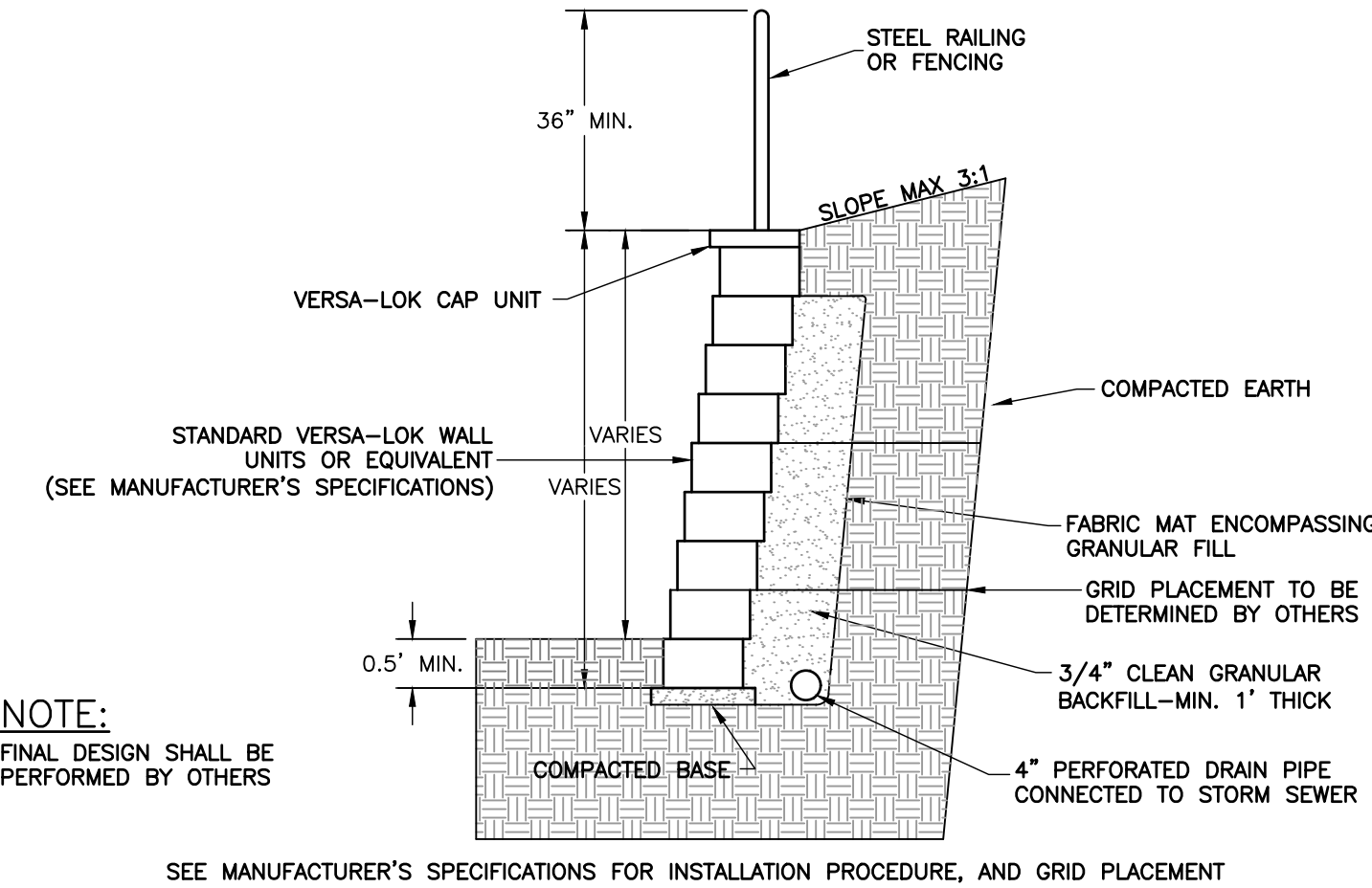


**DETAIL # 05 - CROSS PAN**  
N.T.S



**Figure RR-5. Slotted curb.**

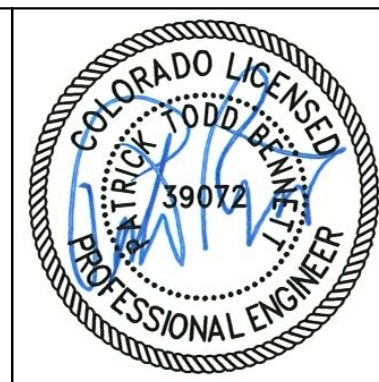
**DETAIL # 06 - SLOTTED CURB**  
N.T.S



**DETAIL # 07 - MODULAR BLOCK RETAINING WALL**  
N.T.S

RR-14 Urban Drainage and Flood Control District April 2017  
Urban Storm Drainage Criteria Manual Volume 3

PATRICK T. BENNETT  
EOR PE #39072  
CITY FILE NO. AR DP 21-00520  
\*HAND SIGNATURE ON FILE



DRAWING NO.: **C900**  
SHEET 17 OF 17

**CONSTRUCTION DETAILS**

**TIDE DRY CLEANERS**  
6160 DUBLIN BOULEVARD  
COLORADO SPRINGS, CO



DATE: AUGUST 2021  
DWG SCALE: AS SHOWN  
PROJECT NO: 311-778  
APPROVED BY: JRM  
JRM  
PTB

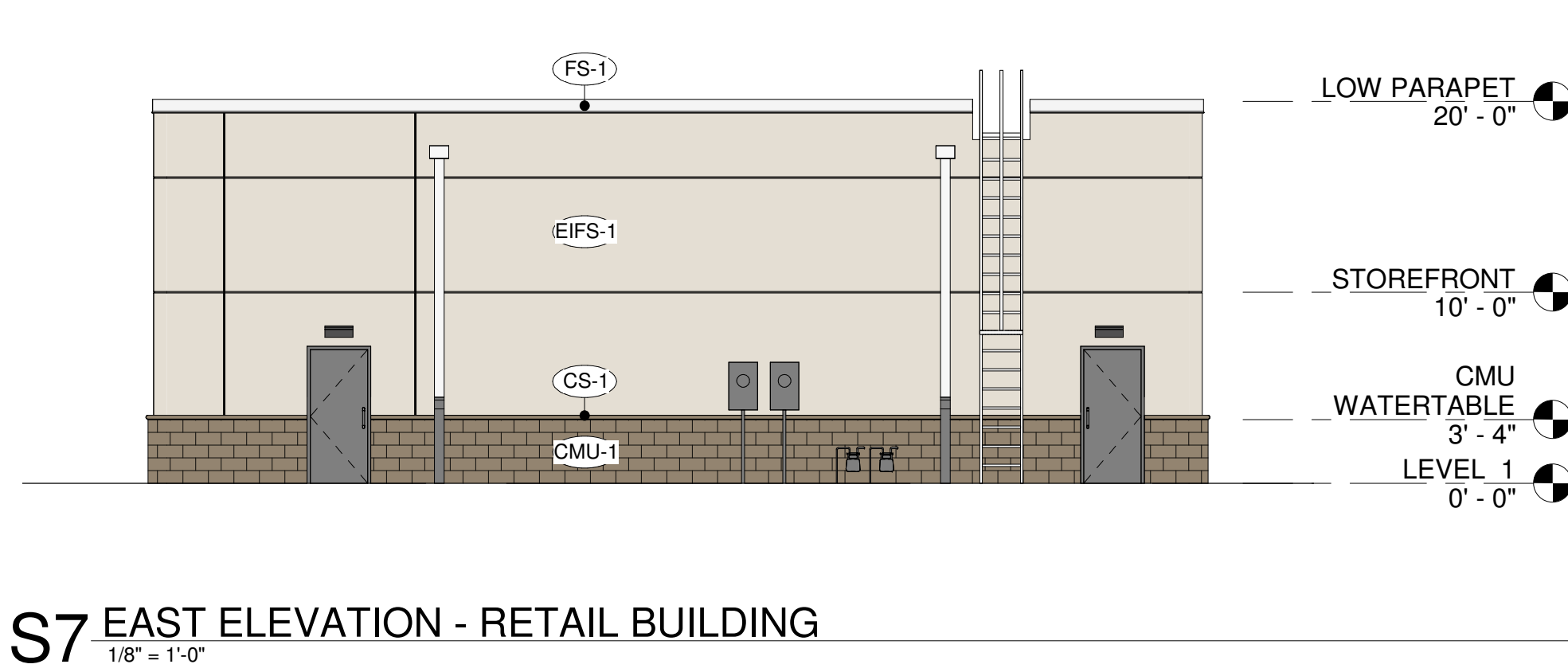
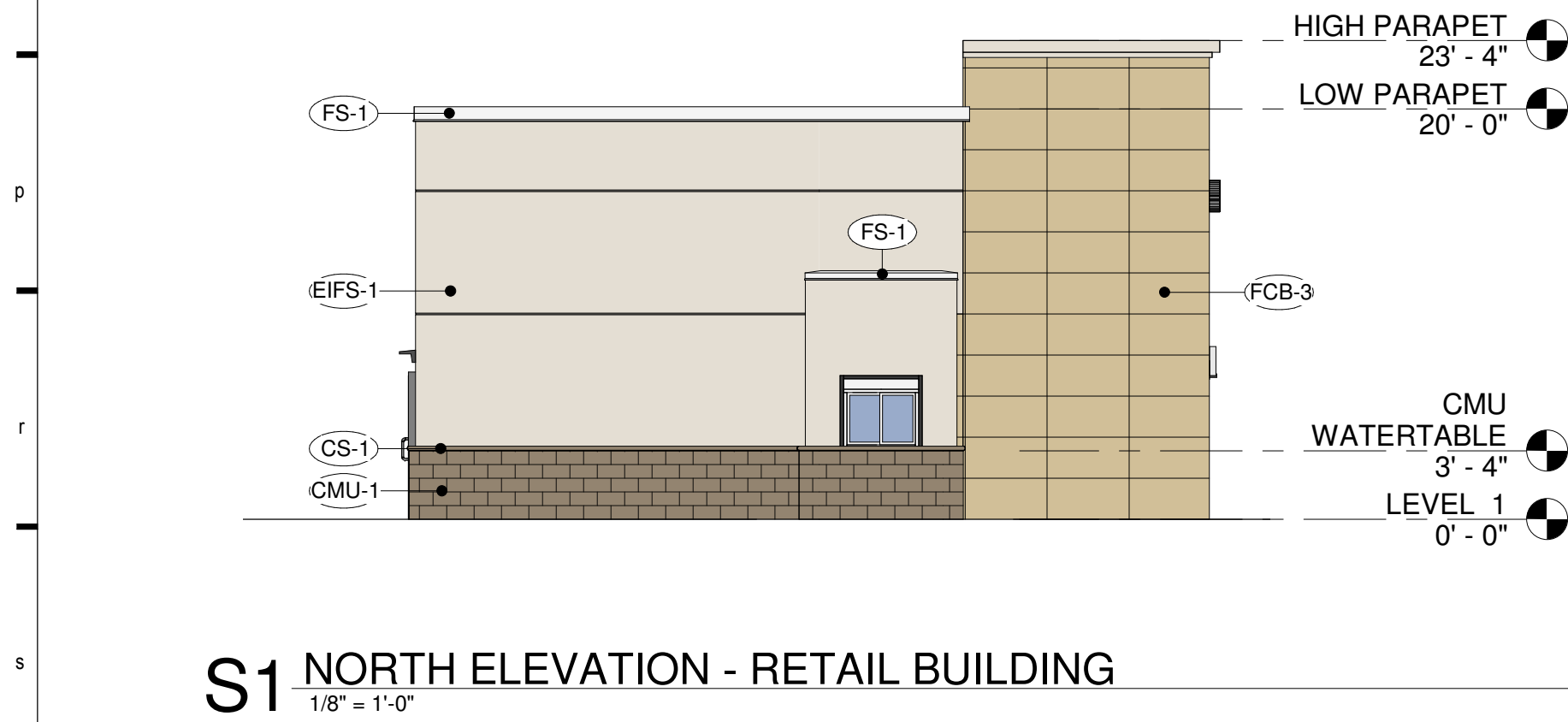
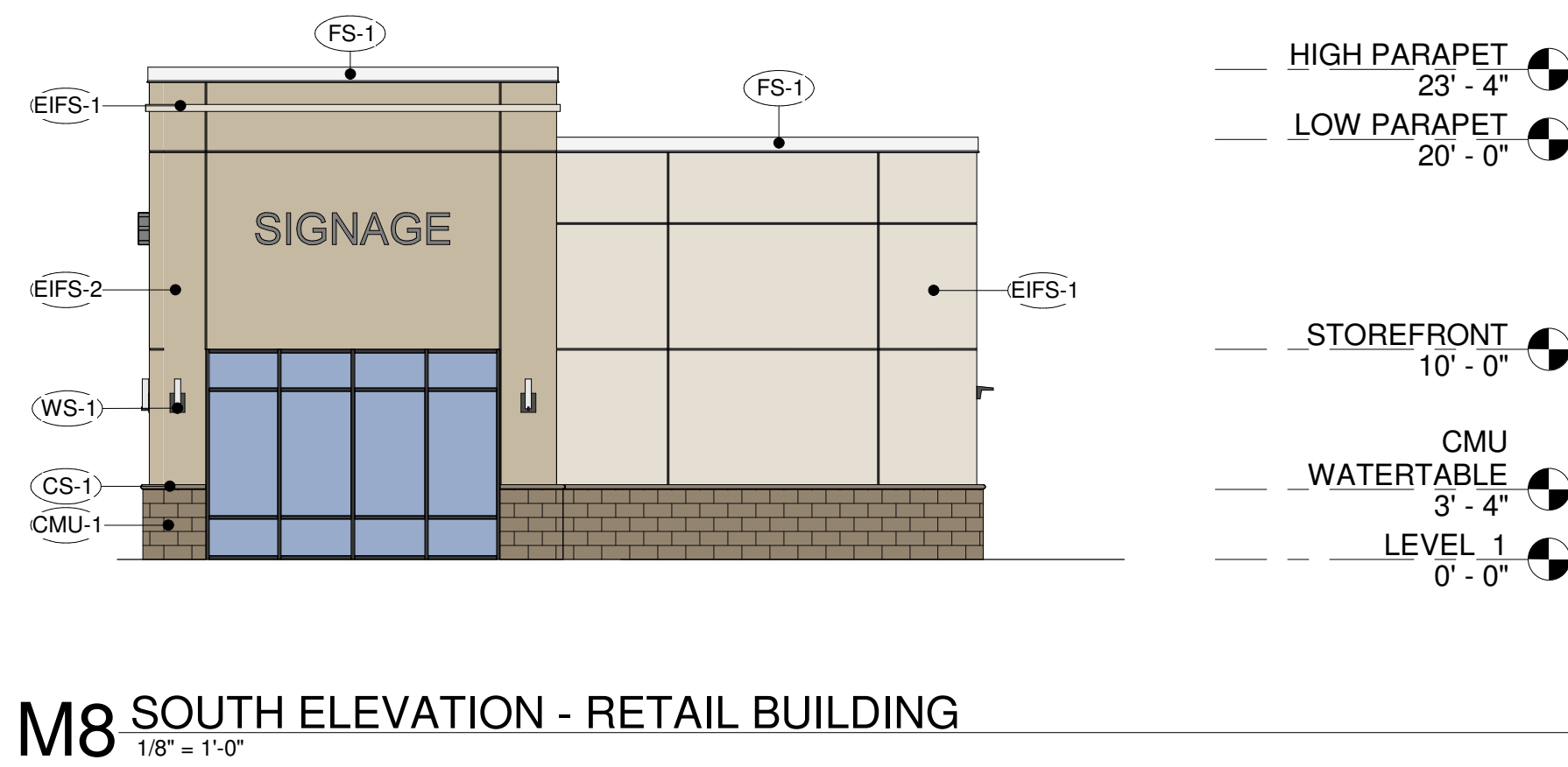
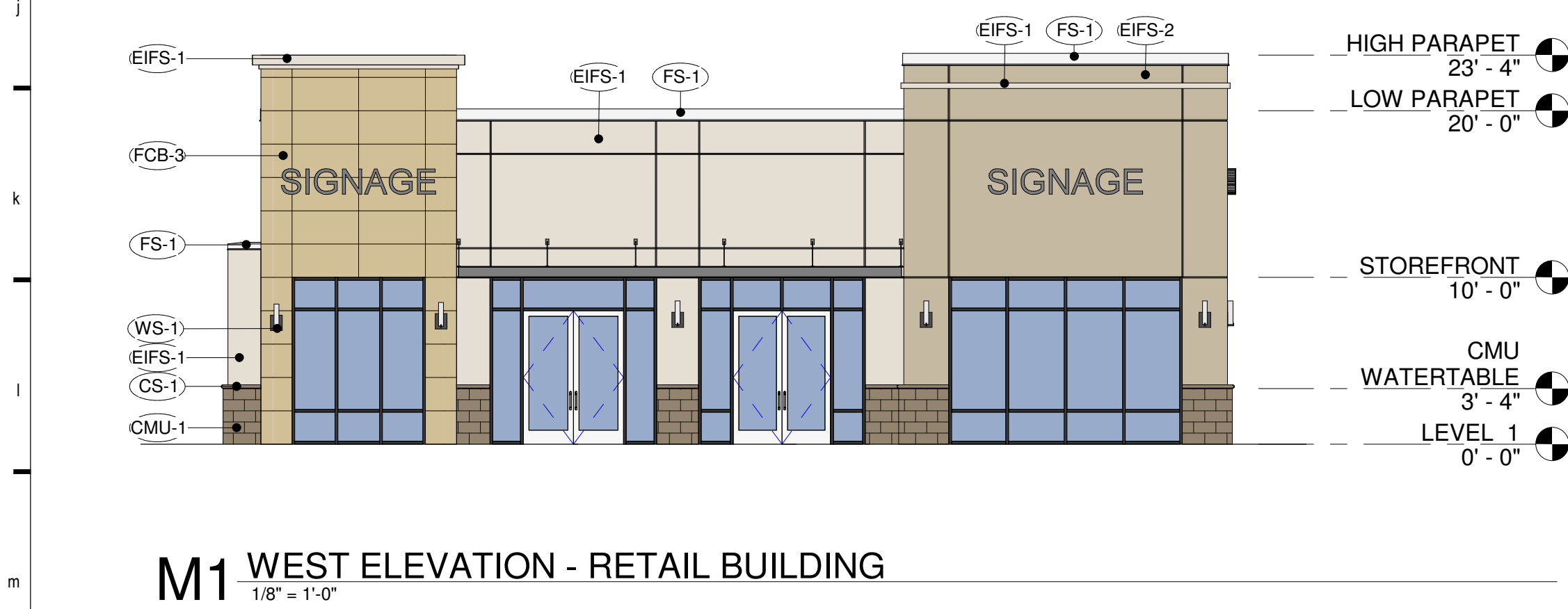
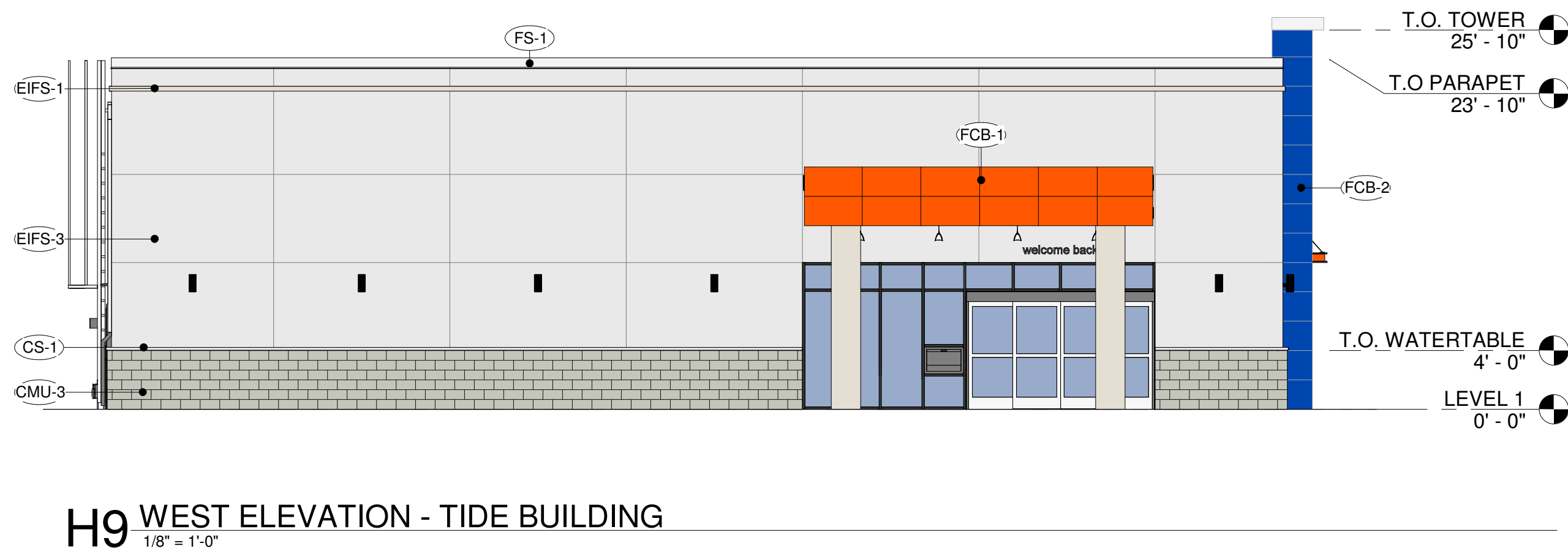
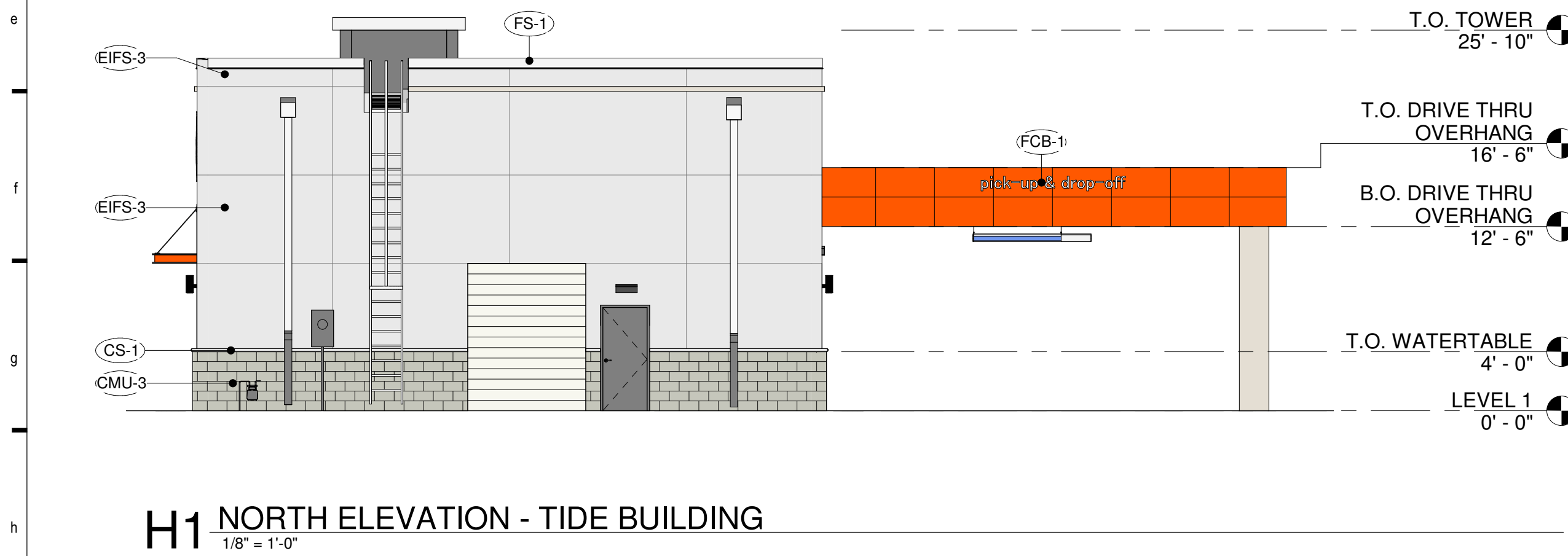
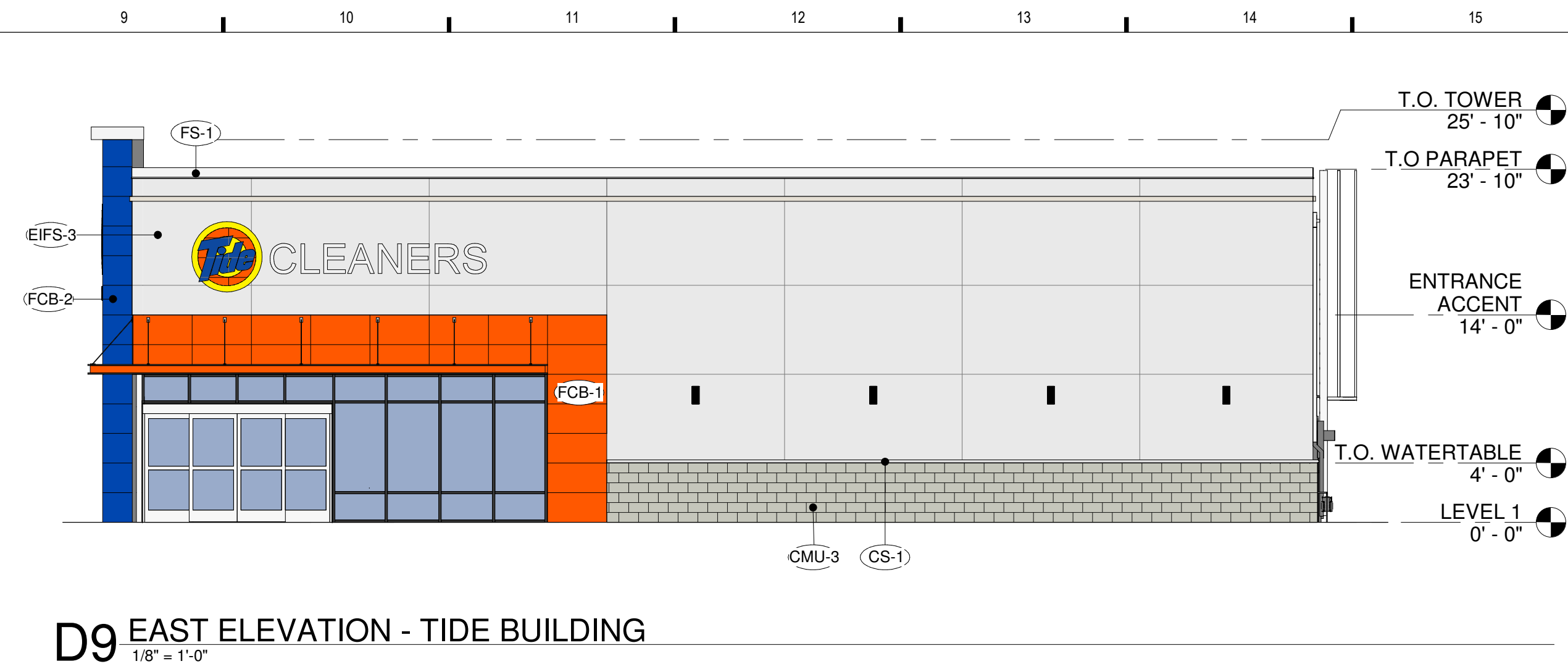
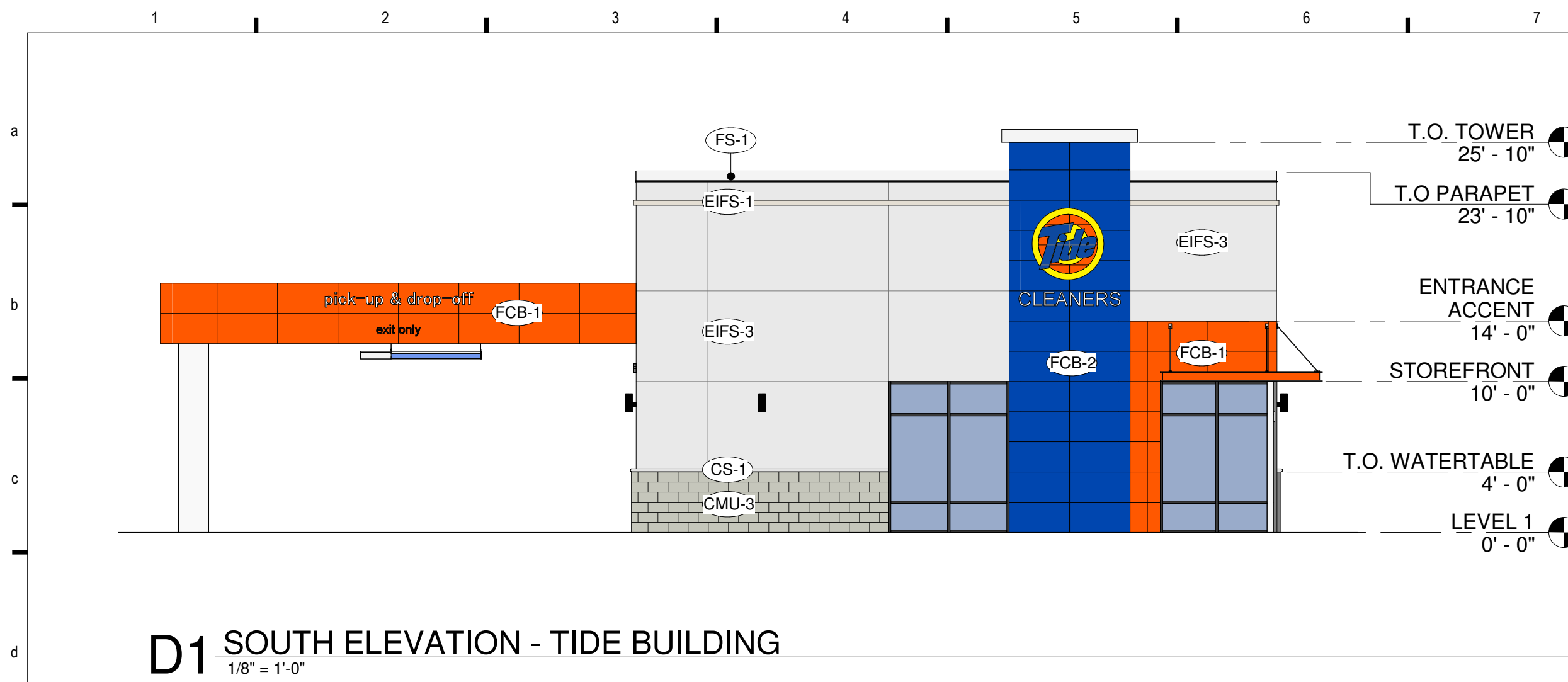
REVISION RECORD

NO	DATE	DESCRIPTION
01	10/15/2021	PER CITY REVIEW COMMENTS
02	01/24/2022	PER CITY REVIEW COMMENTS

**Civil & Environmental Consultants, Inc.**  
3000 Little Hills Expressway · Suite 102 · St. Charles, MO 63301  
314-656-4566 · 866-250-3679  
www.cedinc.com



11/10/2021 4:22:34 PM TIDE - COLORADO SPRINGS



## EXTERIOR FINISH LEGEND

Type Mark	Type	Manufacturer	DESCRIPTION	
			Series / Product #	Location
Architectural Concrete Masonry Unit				
CMU-1	Architectural Concrete Masonry Unit	Athenia	4" Split Face	Exterior Facade Base
CMU-2	Architectural Concrete Masonry Unit	Athenia	8" Split Face	Trash Enclosure - Retail
CMU-3	Architectural Concrete Masonry Unit	Athenia	4" Split Face	Exterior Facade Base
CMU-4	Architectural Concrete Masonry Unit	Athenia	8" Split Face	Trash Enclosure - Tide
Bullnose Waterable Sill				
CS-1	Bullnose Waterable Sill	Tannerstone	Bullnose Sill/ TS0106	Sill
Exterior Insulation Finish System				
EIFS-1	Exterior Insulation Finish System	Dryvit	Sandpebble	Exterior Facade
EIFS-2	Exterior Insulation Finish System	Dryvit	Sandpebble	Exterior Facade
EIFS-3	Exterior Insulation Finish System	Dryvit	Sandpebble	Exterior Facade
Fascia				
FS-1	Fascia	Pac-Clad	Coil Stock	Coping/ Flashing & Downspouts
Fiber Cement Board				
FCB-1	Fiber Cement Board	American Fiber Cement Corporation	Cover, Color - RAL 2008 Orange	Exterior Facade
FCB-2	Fiber Cement Board	American Fiber Cement Corporation	Cover, Color - RAL 5002 Blue	Exterior Facade
FCB-3	Fiber Cement Board	American Fiber Cement Corporation	Cover 540	Exterior Facade
Outdoor Cylinder LED Wall Sconce				
WS-1	Outdoor Cylinder LED Wall Sconce	Kichler	11251BKT30	Exterior Sconce
Outdoor LED Wall Sconce Pitch Single				
WP-1	Outdoor LED Wall Sconce Pitch Single	Tech Lighting	700WSPITSB-LED830	Exterior Service Door Lighting
Storefront				
SF-1	Storefront	Kawneer	Tri-fab 451T/ CLEAR #14	Exterior Storefront