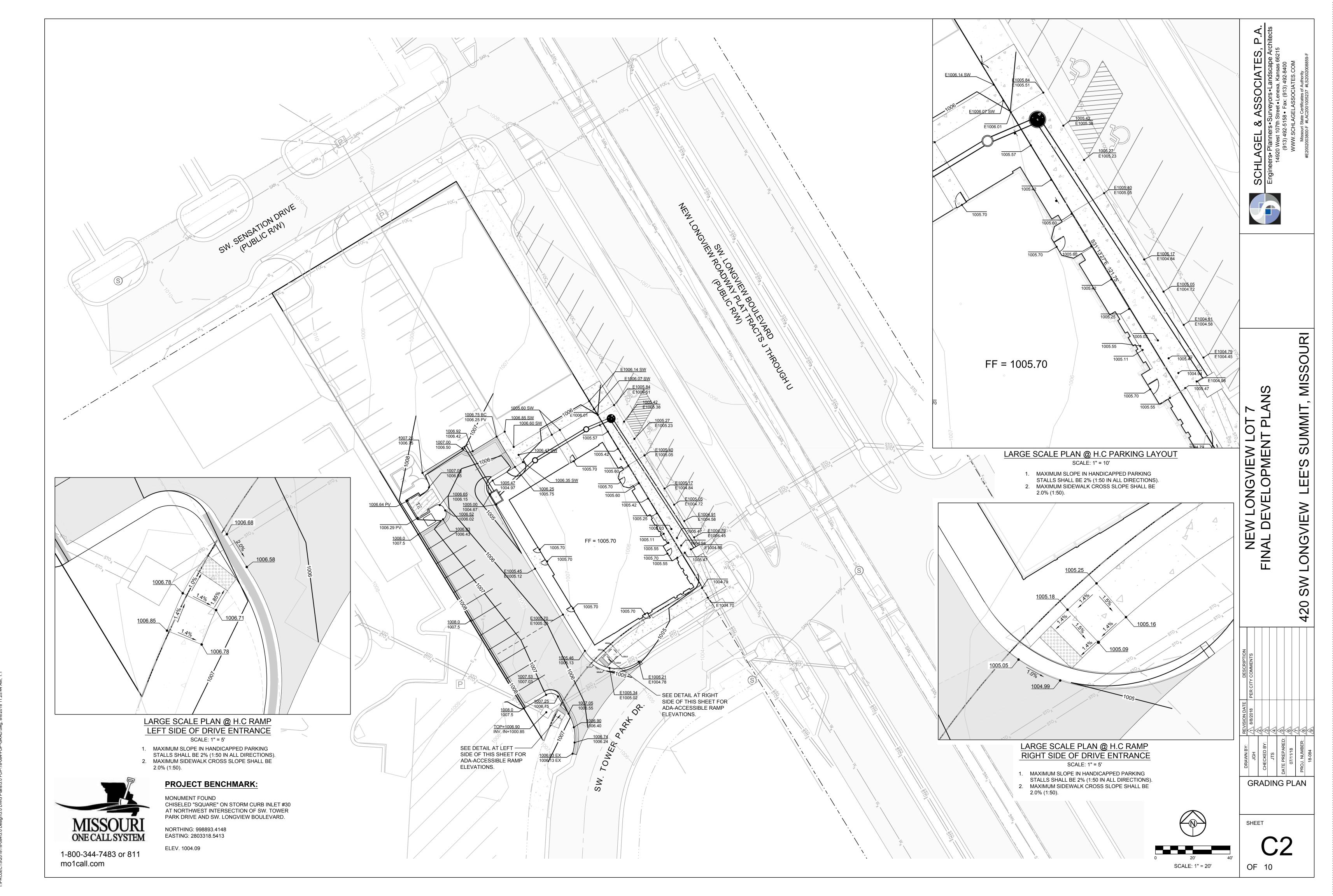
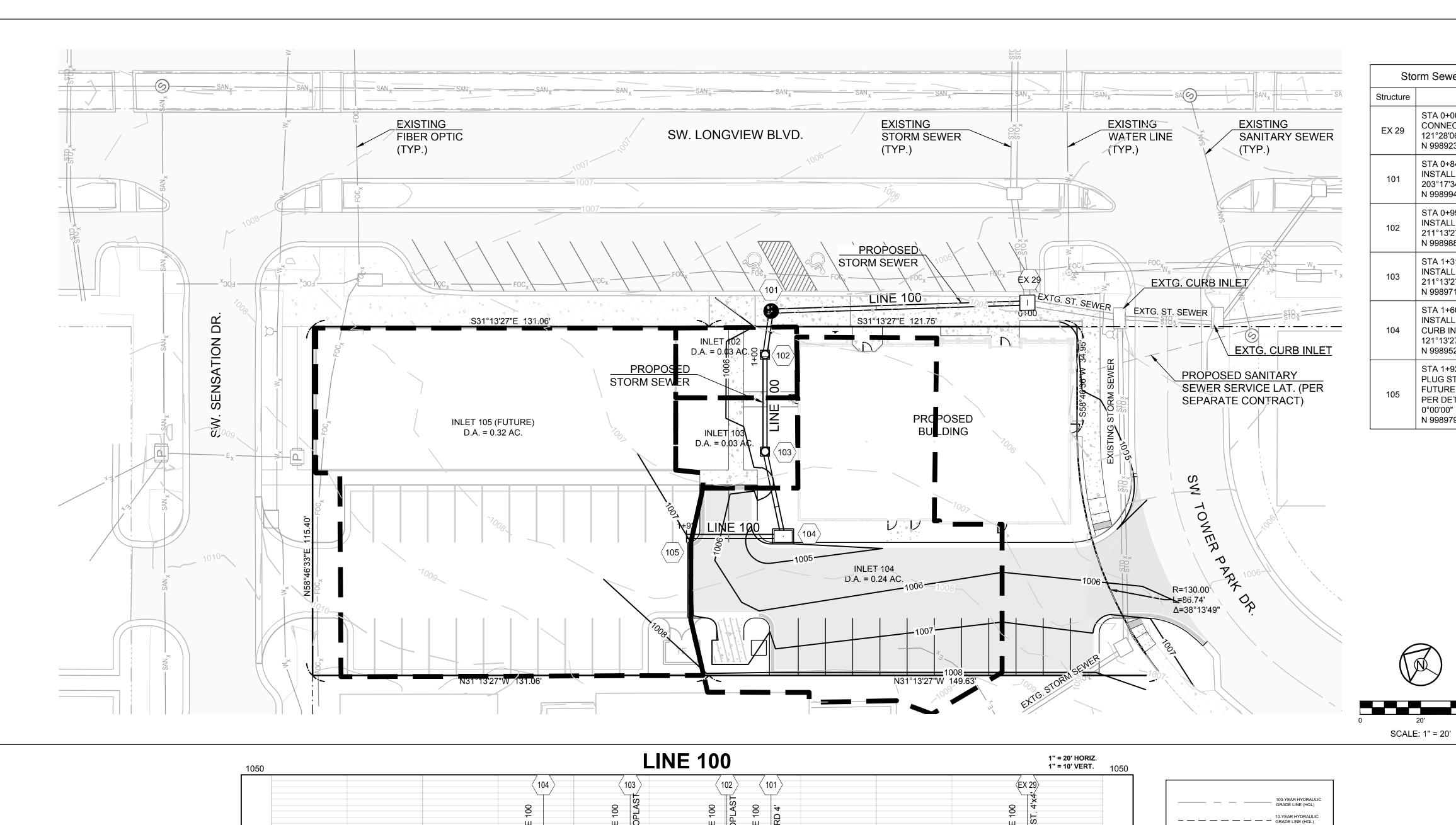
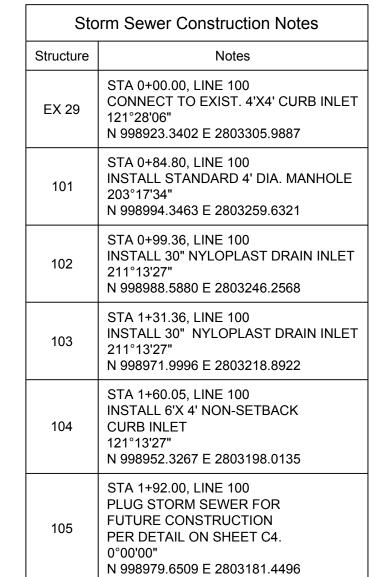


CTS\2018\18-084\3.0 Design\3.0 DWG Plans\3.0 FDP\18-084-FDP-SITE.dwg, 8/8/2018 11::



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## **PROJECT BENCHMARK:**

MONUMENT FOUND CHISELED "SQUARE" ON STORM CURB INLET #30 AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148 EASTING: 2803318.5413

ELEV. 1004.09



1-800-344-7483 or 811

mo1call.com

1040 1030 1030 1020 PROPOSED - EXISTING 1010 GRADE GROUND PLUG END OF STORM — SEWER FOR FUTURE CONNECTION. SEE =---1000 DETAIL SHEET C4. 31.95 LF 15" PEP @ 1.00% 28.69 LF 15" PEP @ 1.01% 32.00 LF 15" PEP 14.56 LF 84.80 LF 15" PEP 15" PEP @ 0.96% @ 1.00% @ 1.26% 990 980 970 960 FL IN (S) Z O 950 2+50 2+00 1+50 1+00 0+50 0+00

chi	agel &	Ass	ociate	s, P.	A.																					
Proje	ct Name:		Good Vets - Longview - Lot 7								ırb Type:	: CG-1														
OF THE PARTY NAMED IN COLUMN			18-084						City		: Lee's Summit															
	Time:		7/10/2018 12:48																							
Desic	n Storm:		100																							
"K" Value:		1.25																								
"F	" Factor:		1.00																							
noff Calculations														Pipe Pr	roperties											
			Cumul.				Runoff				Up	Up	Up									Drop				
nlet	Area	"C"	Area	Cumul.			To	Cumul.	Pipe	Pipe	Piped	Piped	Area	Up	Up	Down	Pipe	"n"	Pipe		Slope	In			Inlet	HGL
#	(acres)	Value	(acres)	CxA	Tc	Intensity	Inlet	Runoff	Cap.	Vel.	Inlet 1	Inlet 2	(acres)	CxA	Inlet	Inlet	Type	Value	Size	Length	%	Inlet	FL Up	FL Down	Тор	Elev.
IE 100																							[	OS TAILWATE	R@STR#	FREE
01	0.00	0.81	0.62	0.50	5.3	10.19	0.00	6.40	7.86	6.40	1		0.00	0.00	101		PEP	0.012	15	84.80	1.26	0.50	998.90	997.83	1005.88	1000.19
02	0.03	0.81	0.62	0.50	5.3	10.21	0.31	6.41	7.00	5.70			0.00	0.00	102	101	PEP	0.012	15	14.56	1.00	0.50	999.54	999.40	1005.20	1000.84
03	0.03	0.81	0.59	0.48	5.2	10.25	0.31	6.12	7.00	5.70			0.00	0.00	103	102	PEP	0.012	15	32.00	1.00	0.50	1000.36	1000.04	1005.20	1001.63
)4	0.24	0.81	0.56	0.45	5.1	10.28	2.50	5.83	7.00	5.70			0.00	0.00	104	103	PEP	0.012	15	28.69	1.00	0.50	1001.15	1000.86	1005.00	1002.38
05	0.32	0.81	0.32	0.26	5.0	10.32	3.34	3.34	7.00	5.70			0.00	0.00	105	104	PEP	0.012	15	32.00	1.00	N/A	1001.97	1001.65	1007.00	1002.86

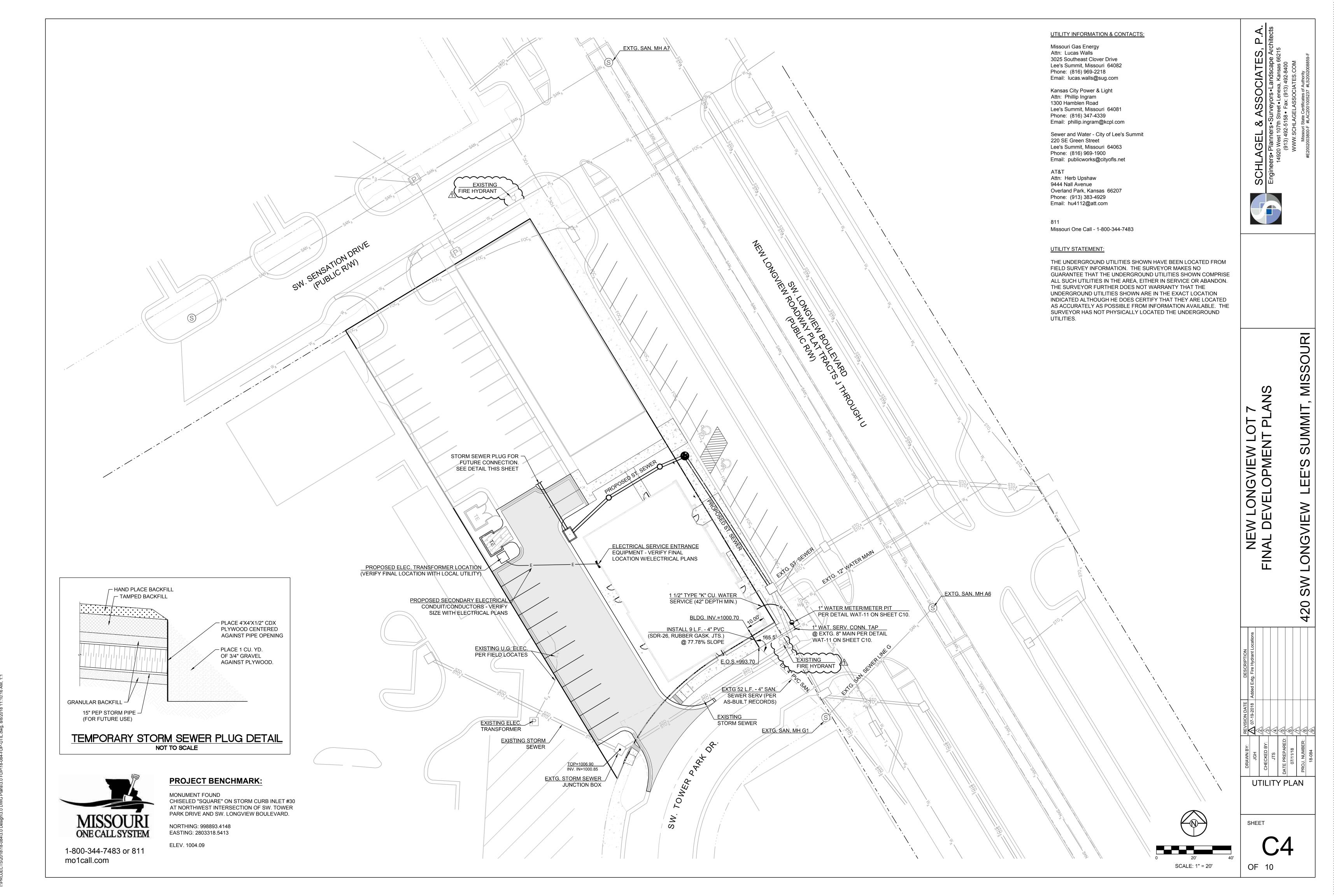
EW LC NEW LONGVI FINAL DEVELOPI LONGVIEW 420

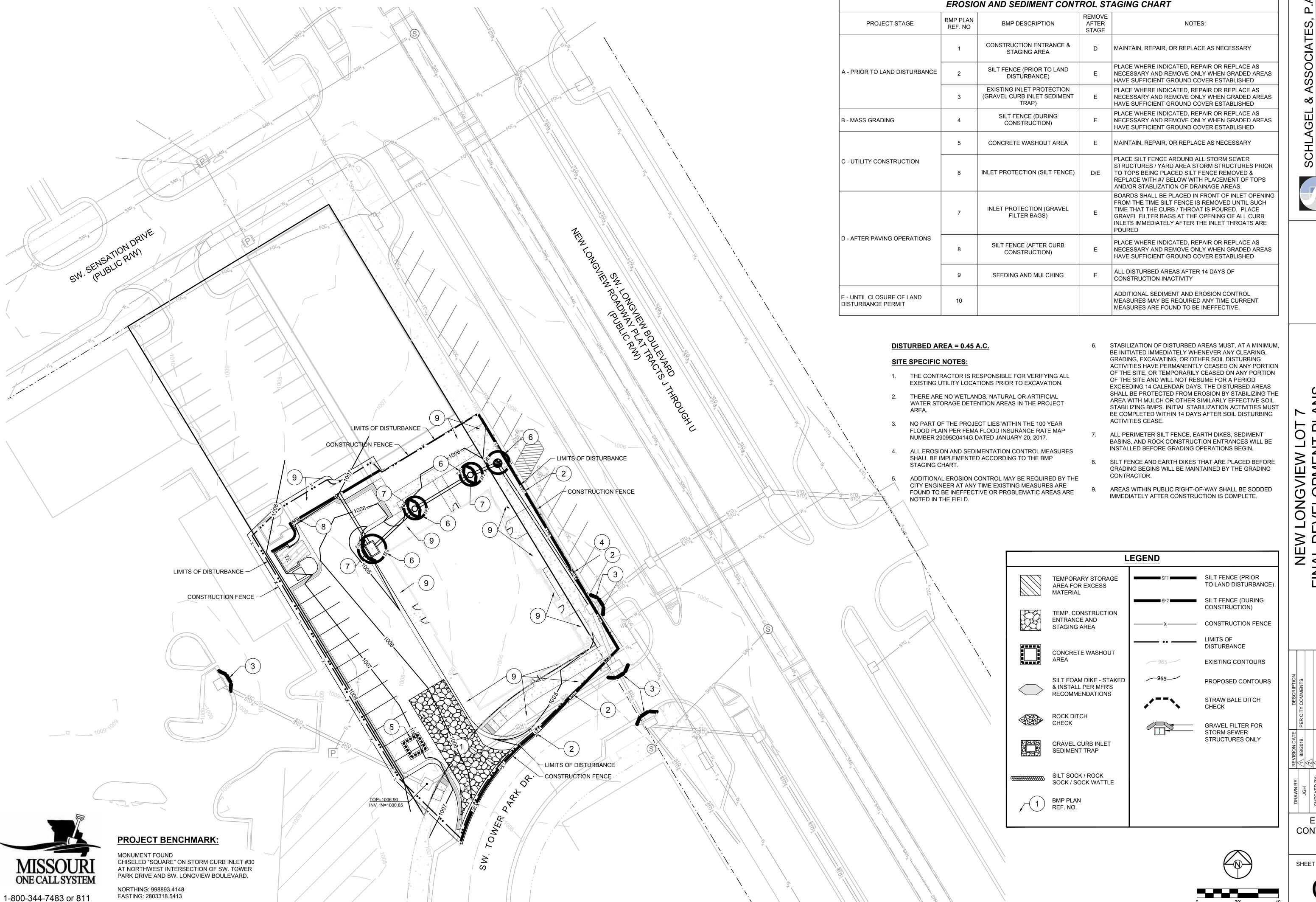
STORM SEWER

PLAN & PROFILE

SHEET

OF 10





mo1call.com

ELEV. 1004.09



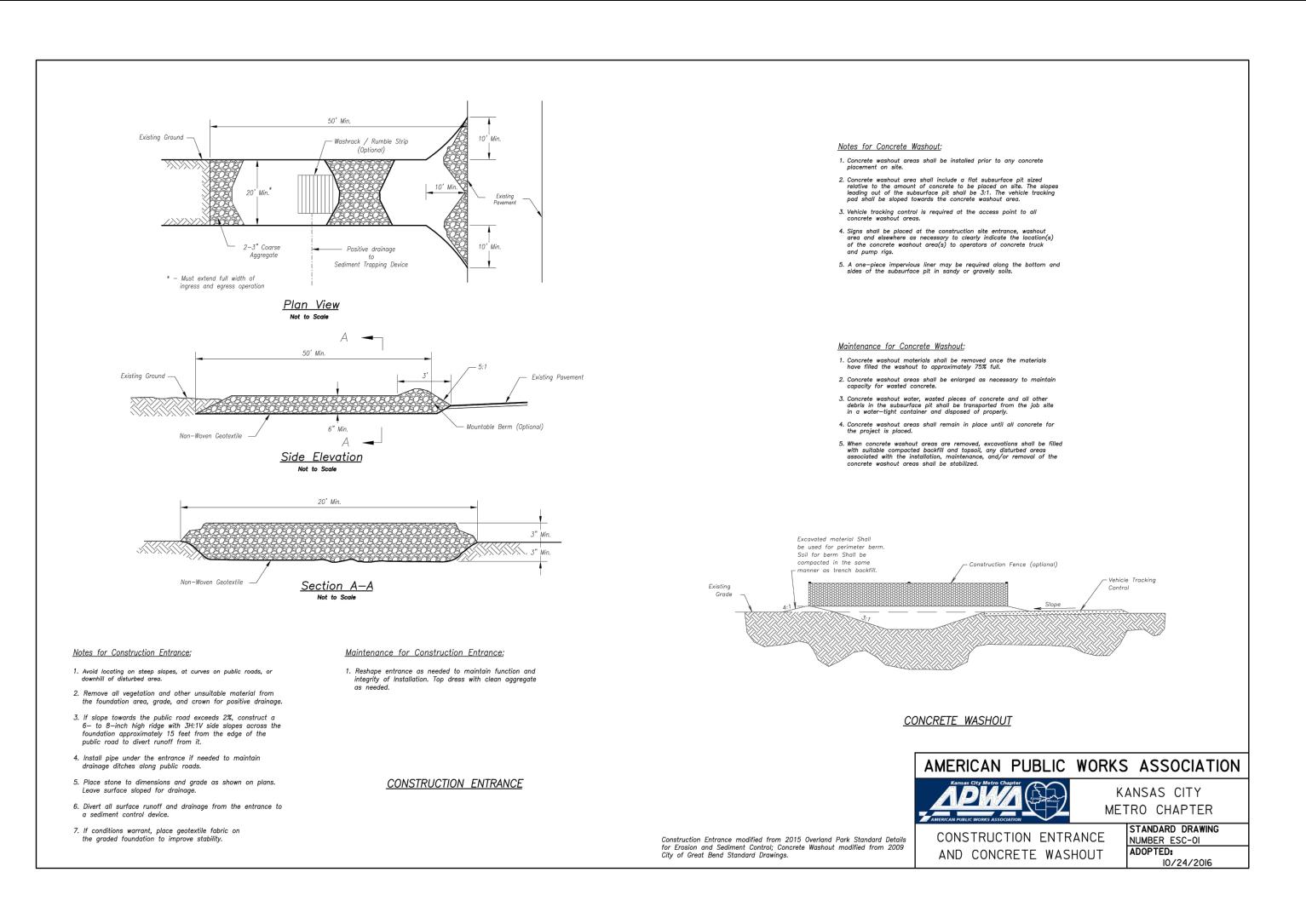
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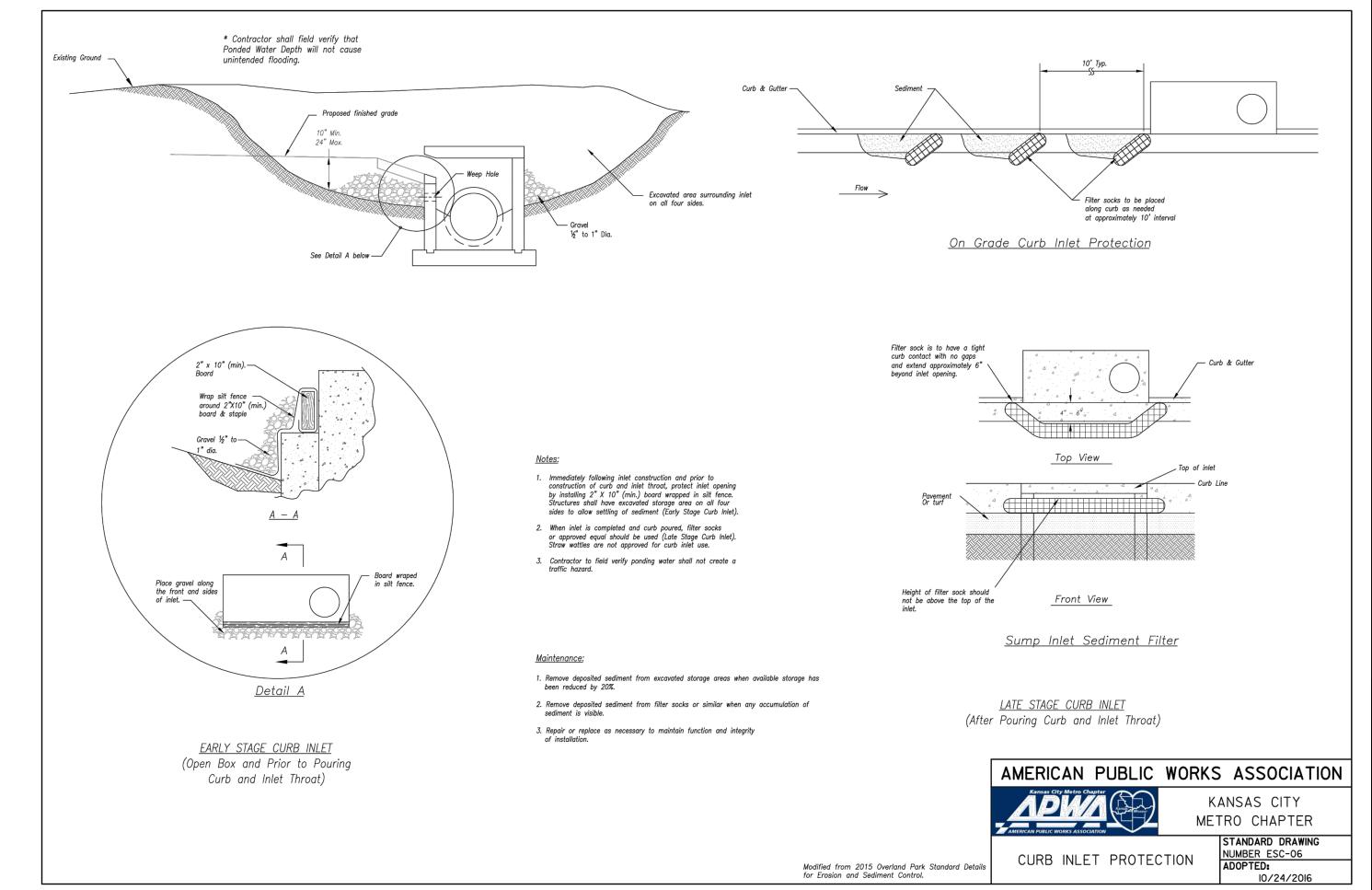
**EROSION** 

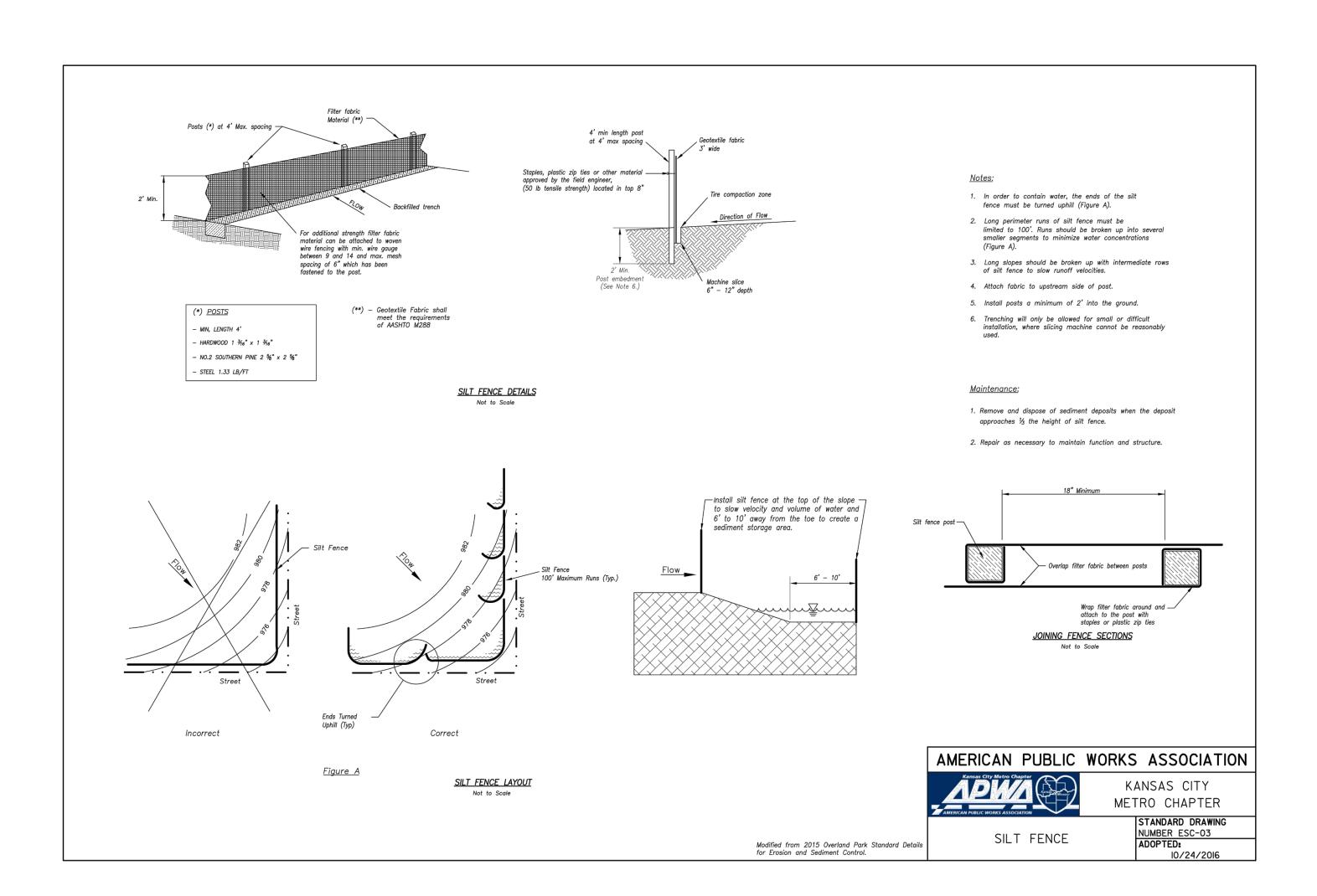
**CONTROL PLAN** 

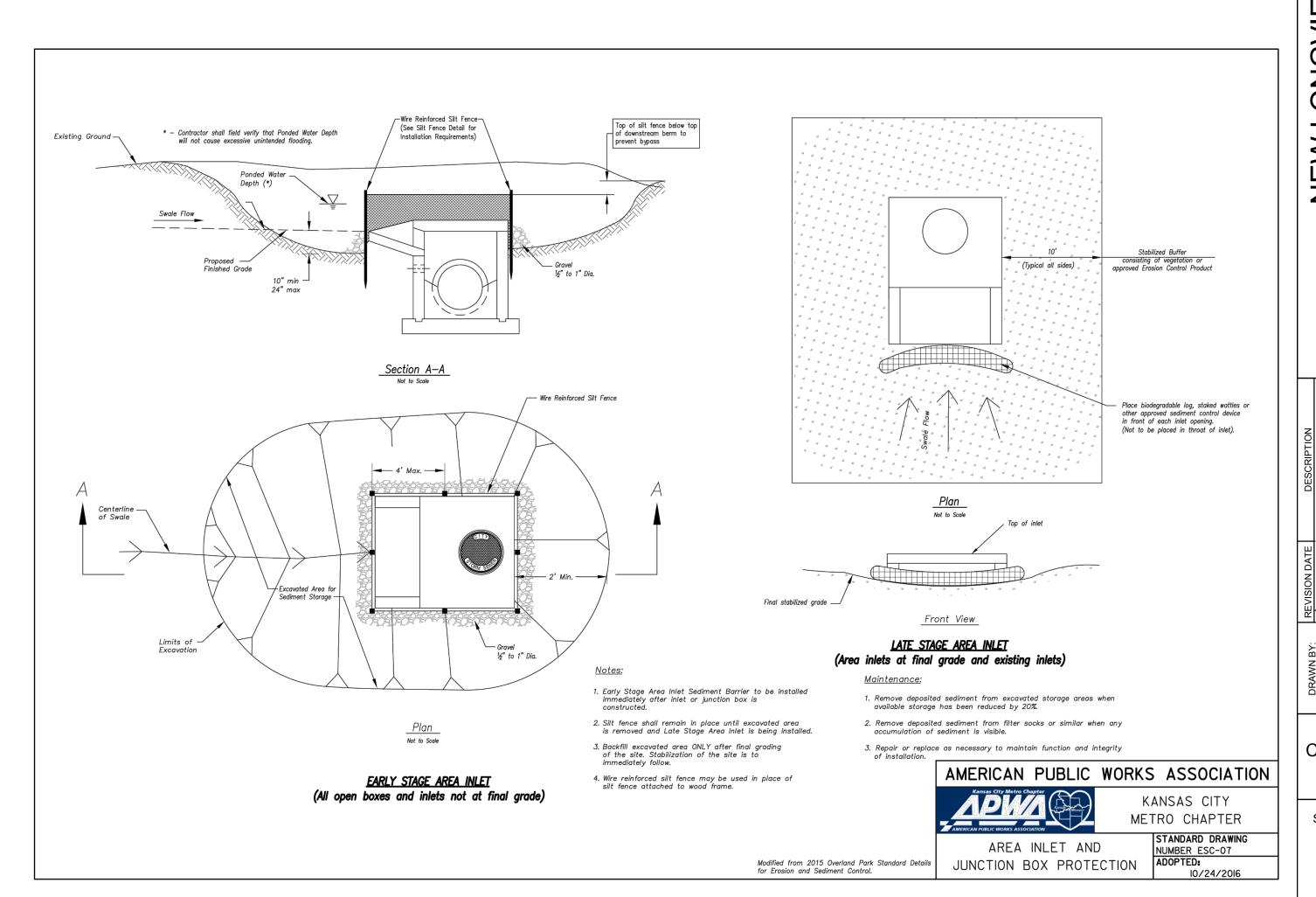
SHEET

SCALE: 1" = 20'









NEW LONGVIEW LOT 7
FINAL DEVELOPMENT PLANS
/ LONGVIEW LEE'S SUMMIT, MISSOURI

 DRAWN BY:
 REVISION DATE
 DESCRIPTION

 JGH
 1/3
 8/8/2018
 PER CITY COMMENTS

 CHECKED BY:
 3/3
 A

 JTS
 4/4
 A

 ATE PREPARED:
 6/5
 A

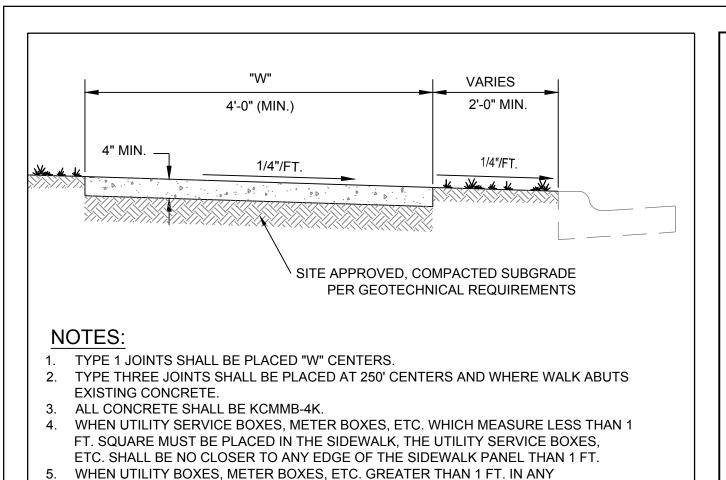
 07/11/18
 6/5
 A

 18-03. NUMBER:
 8/6
 A

EROSION
CONTOL DETAILS

C6

OF 10



DIMENSION MUST BE PLACED IN THE SIDEWALK, THEY SHALL BE PLACED IN THE

MOISTURE) AND COMPACTED. DEPTH OF LEVELING COURSE SHALL NOT EXCEED

AN ISOLATION JOINT SHALL BE PLACED BETWEEN THE CONCRETE AND ANY

NO SECTION OF SIDEWALK LESS THEN 12" IN ANY DIMENSION. (HORIZONTAL)

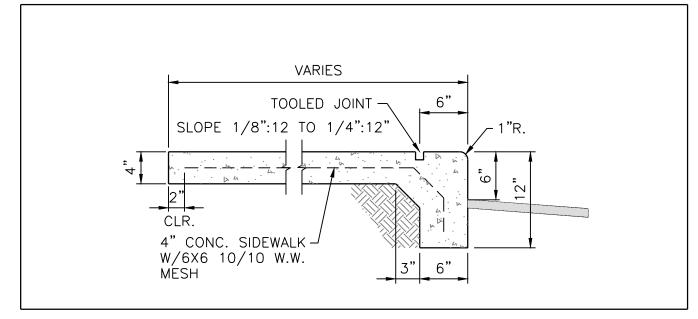
8. AB-3 MAY BE USED AS A LEVELING COURSE. AB-3 MUST BE MOIST (MIN. 5%

UTILITY BOX, ETC. WHICH IS PLACED IN THE SIDEWALK.

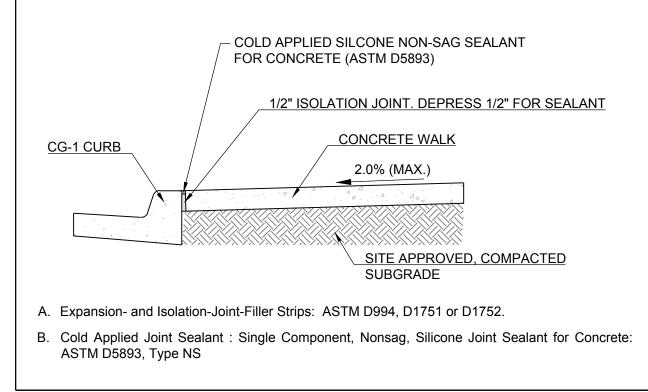
## TYPICAL CONCRETE SIDEWALK DETAILS

6". CLEAN ROCK WILL NOT BE ALLOWED.

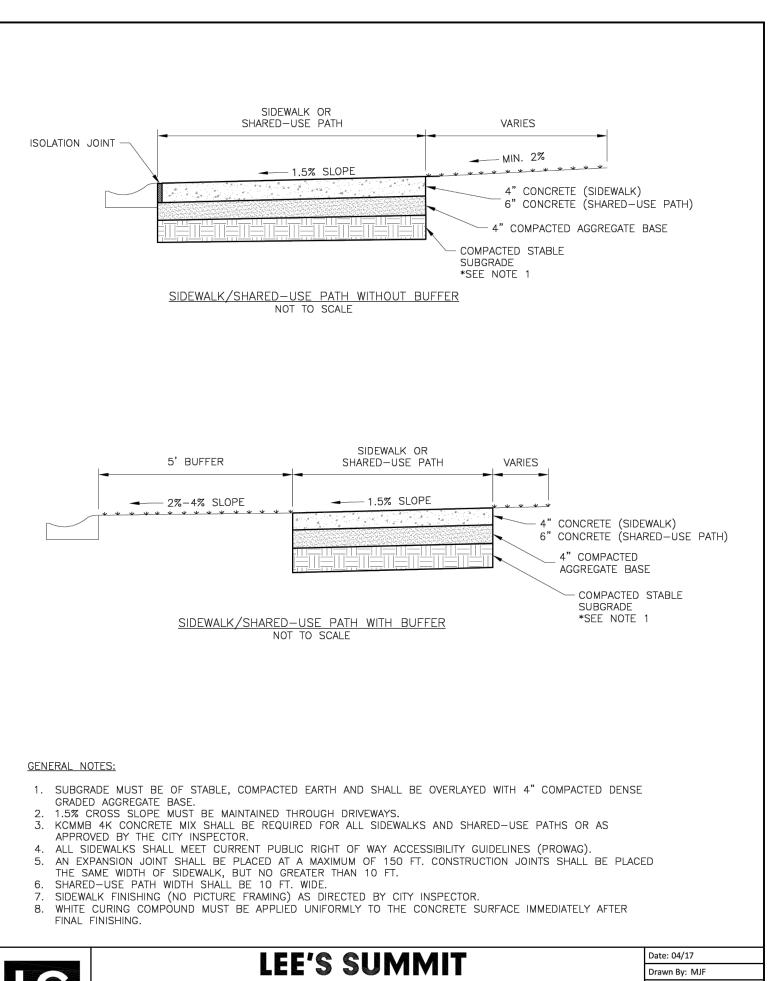
CORNER OF THE SIDEWALK PANEL.



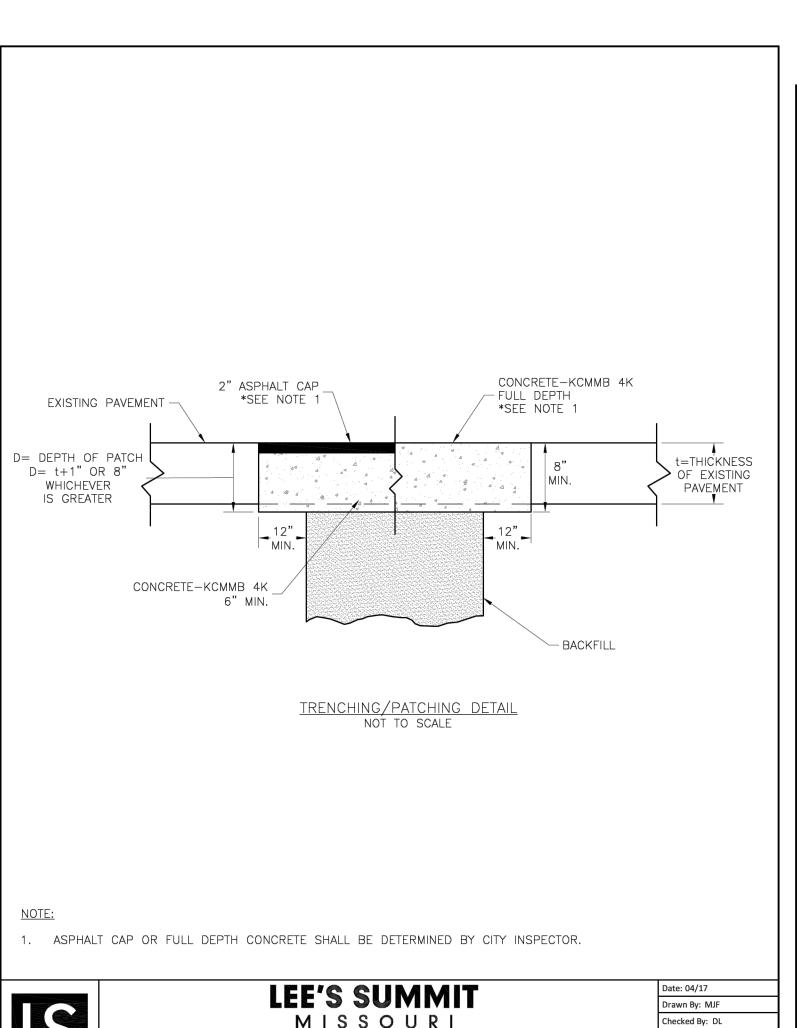
### INTEGRAL CURB/SIDEWALK DETAIL







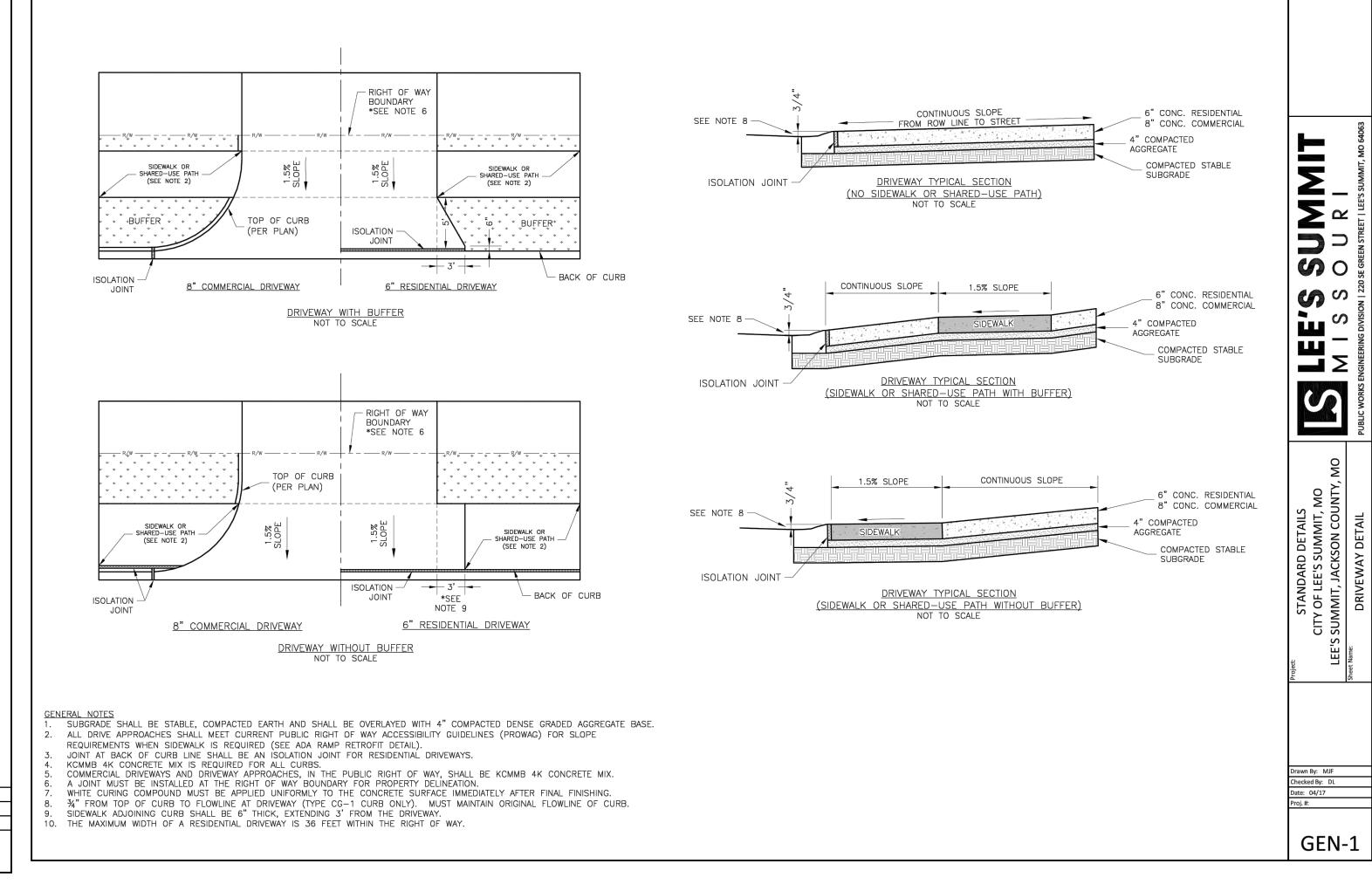


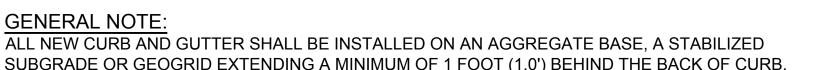


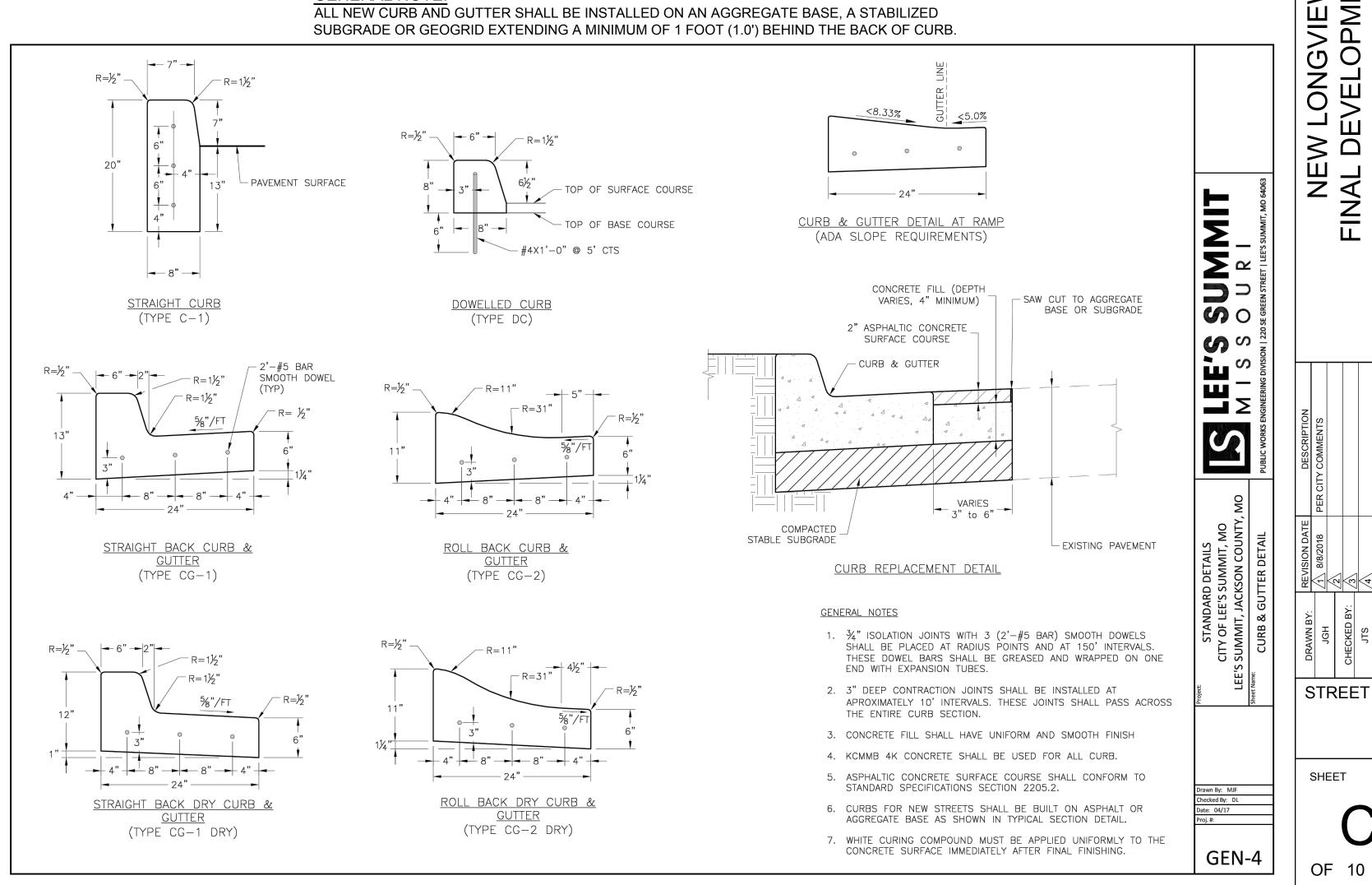
TRENCHING/PATCHING ROADWAYS DETAIL

Checked By: DL

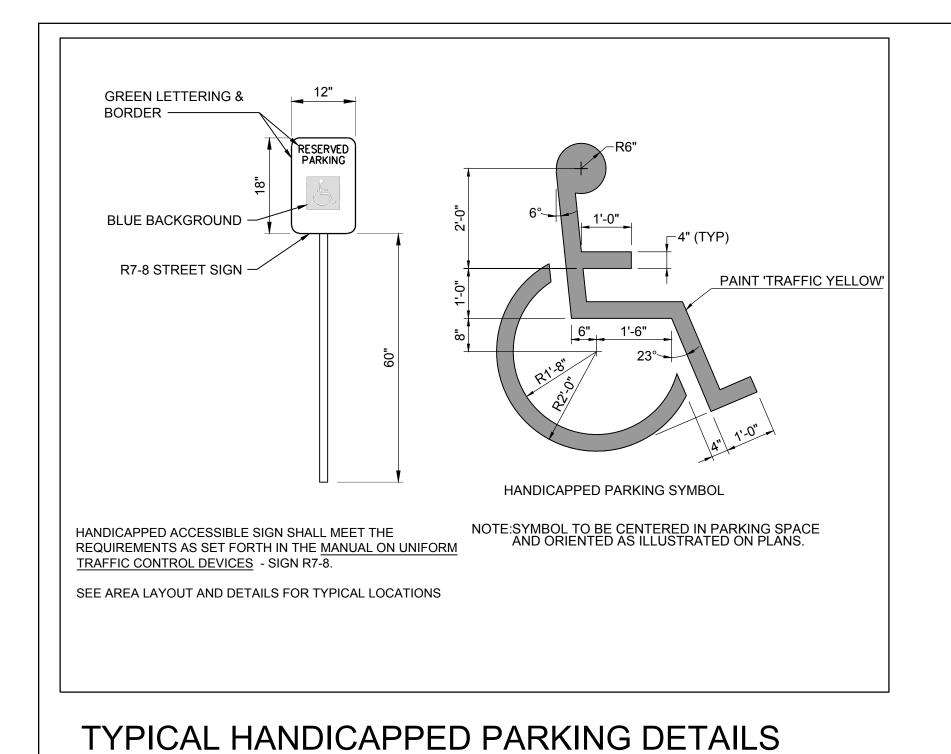
GEN-5

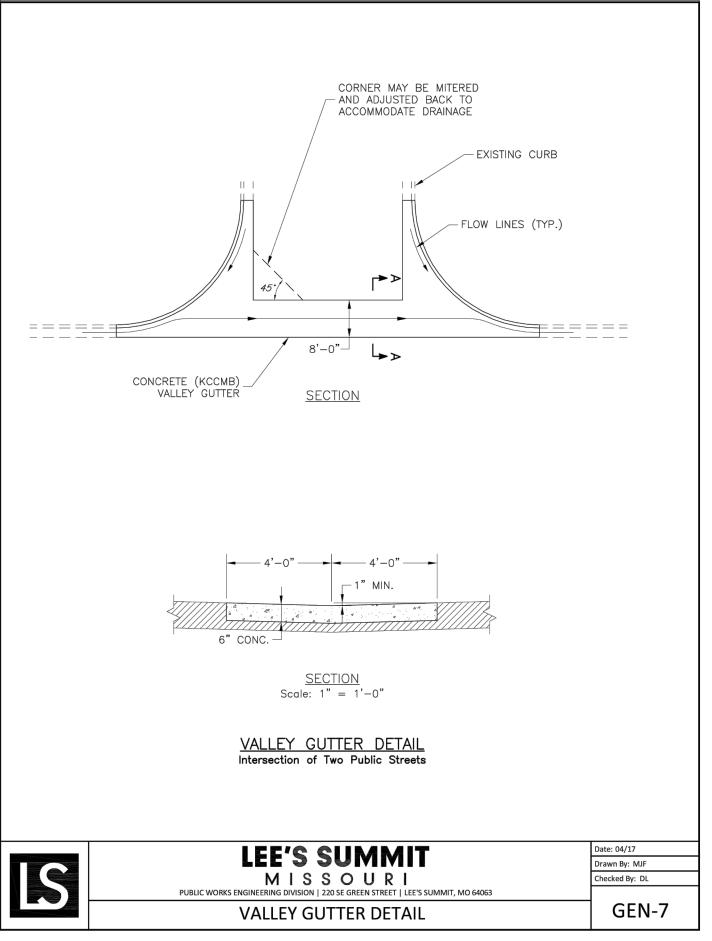


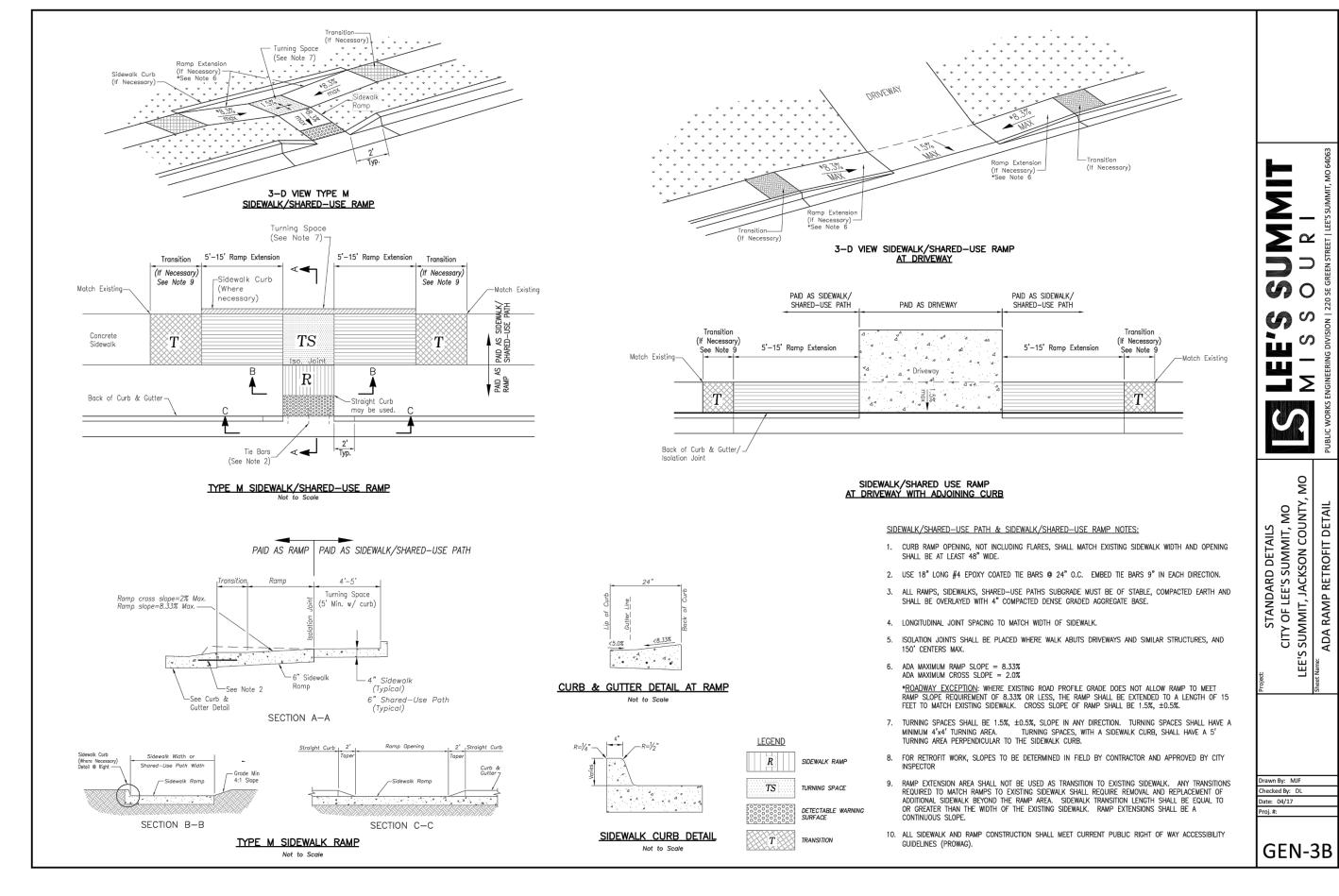


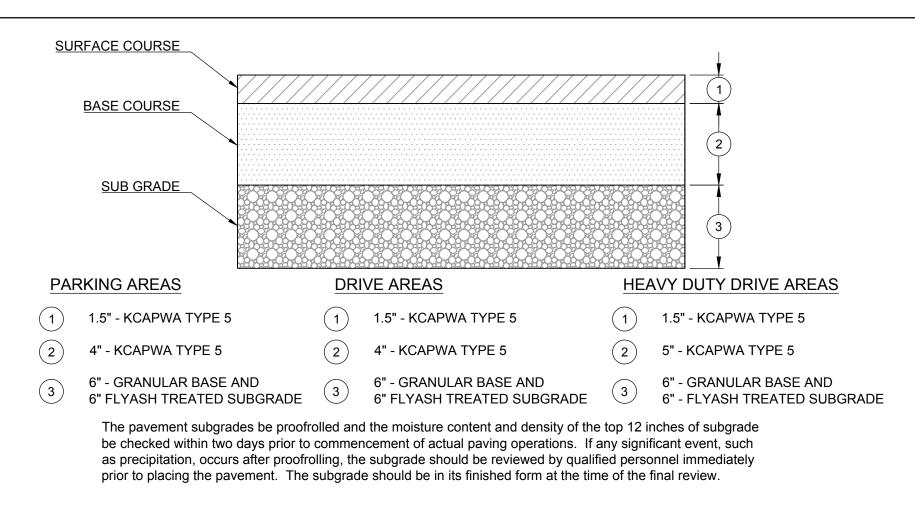


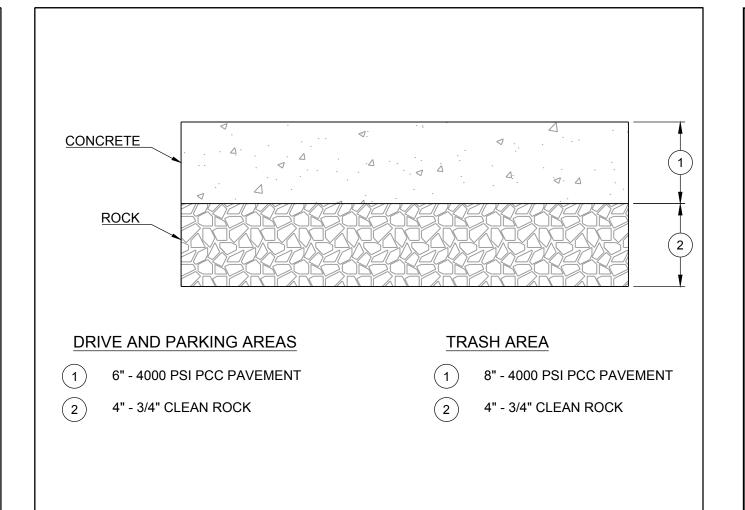
ONGVIE  $\geq$   $\Box$ 20 STREET DETAILS SHEET



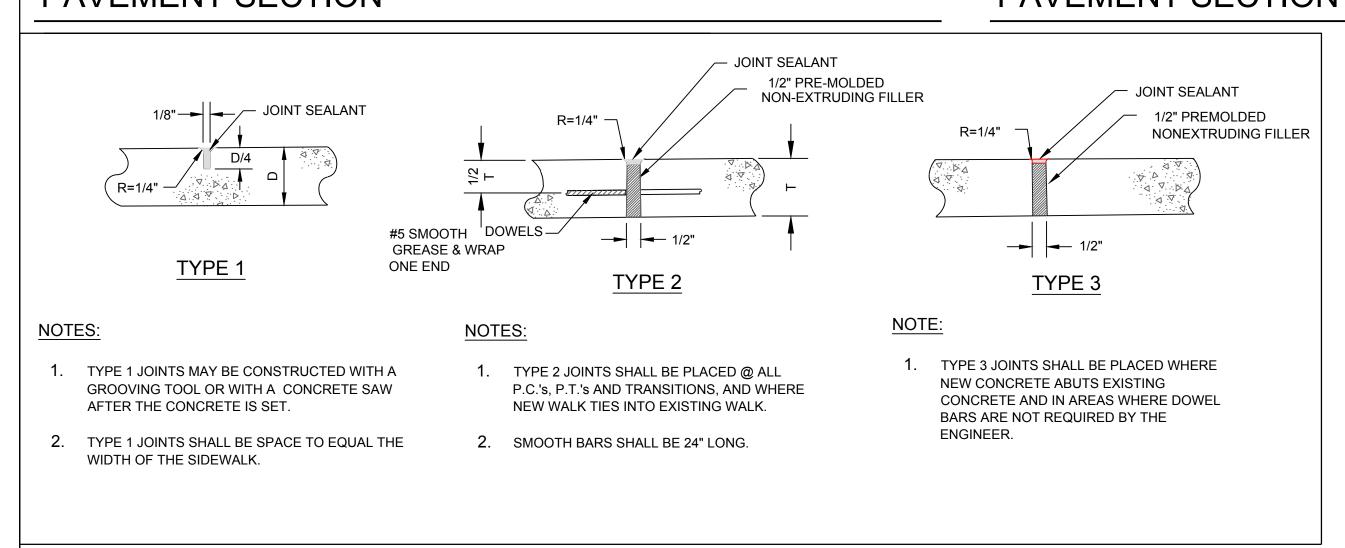


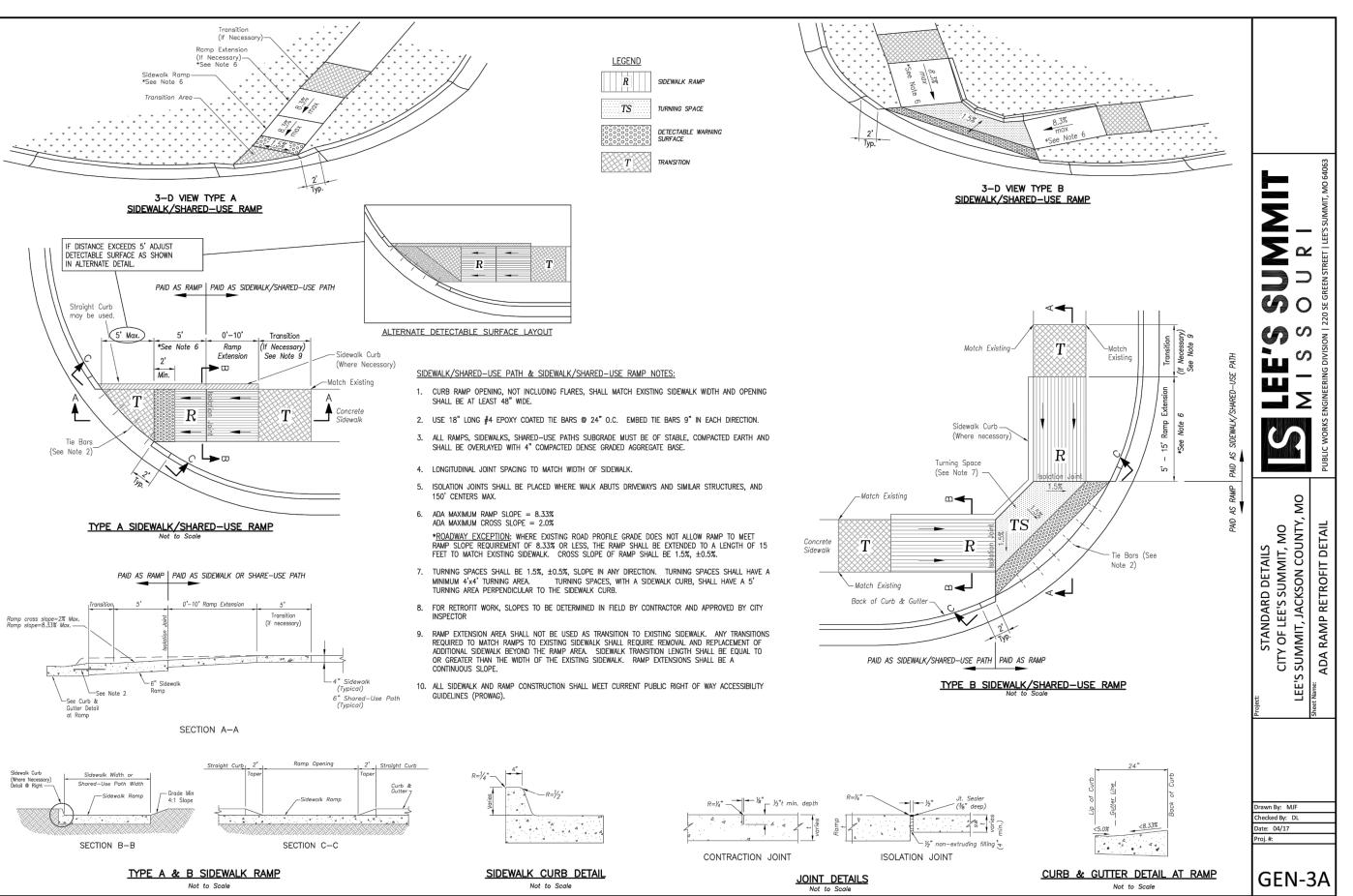






# TYPICAL ASPHALT PAVEMENT SECTION TYPICAL CONCRETE PAVEMENT SECTION





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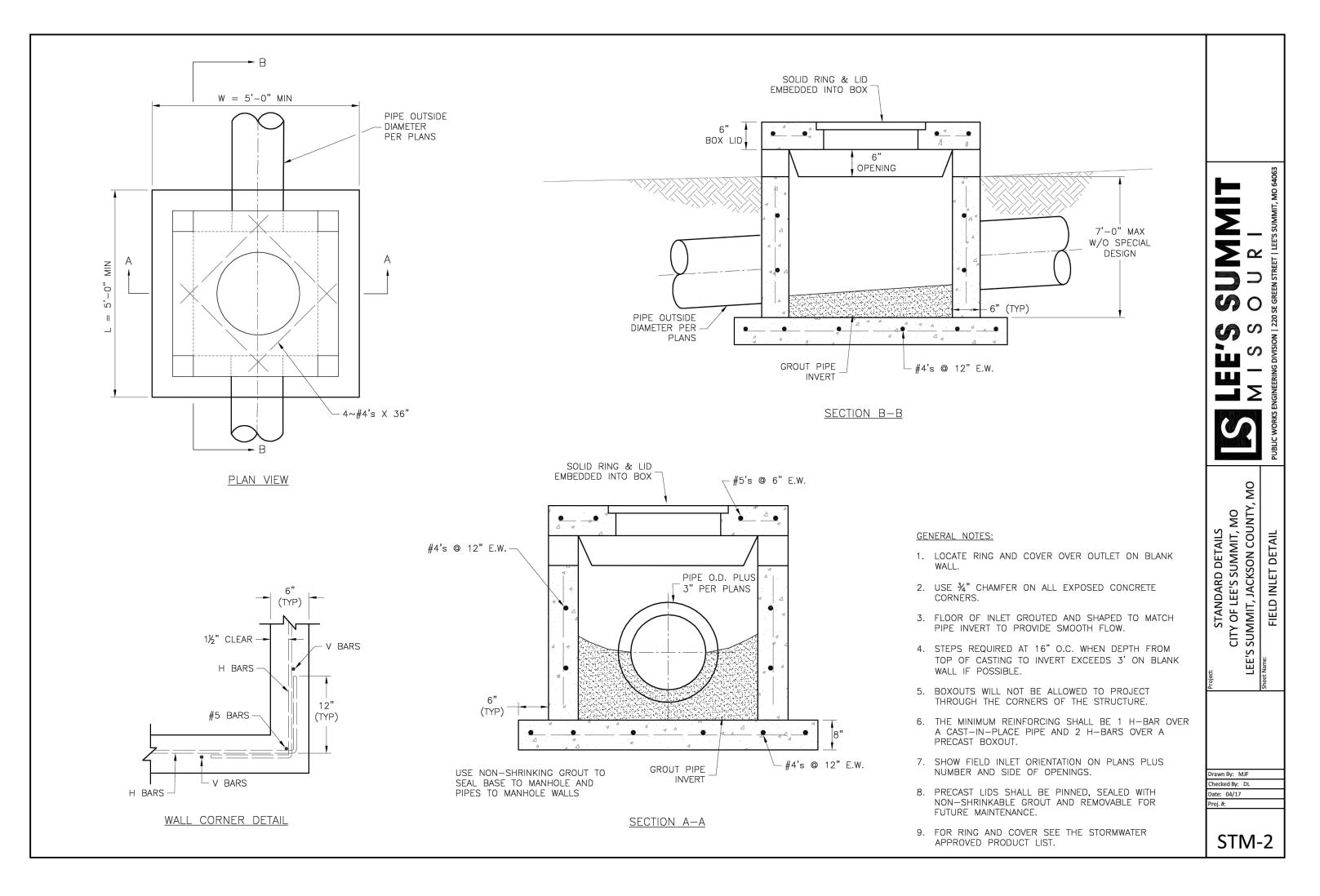
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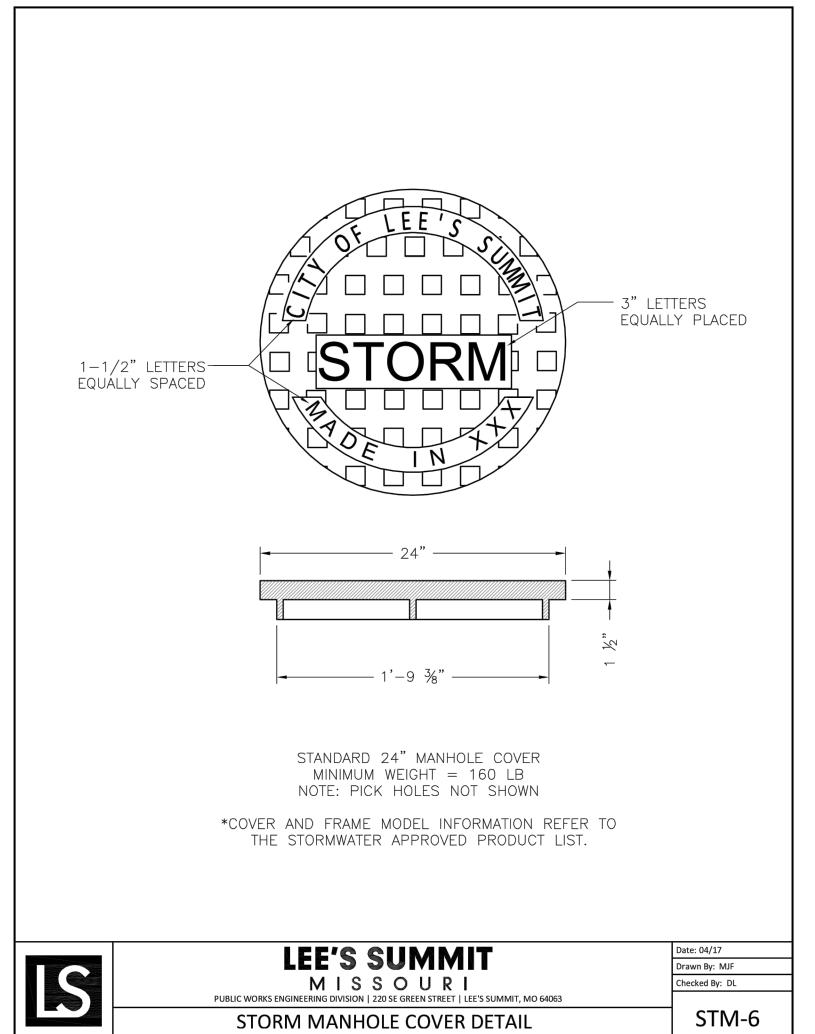
STREET DETAILS

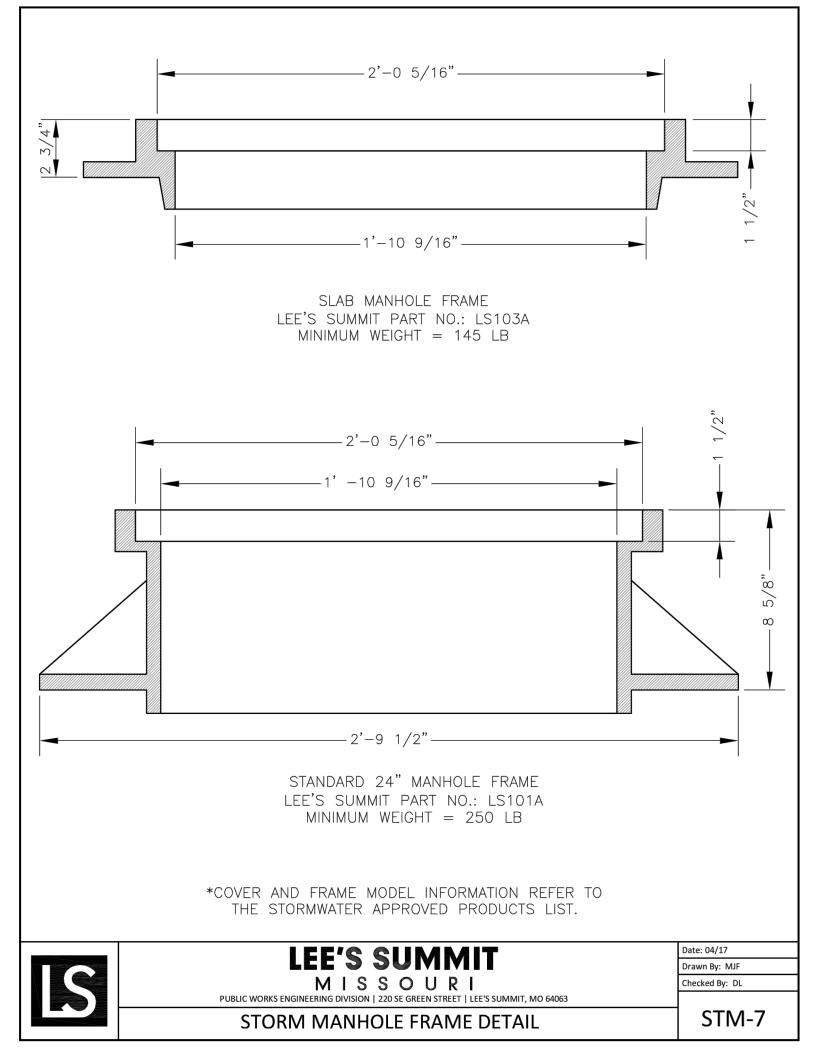
SHEET

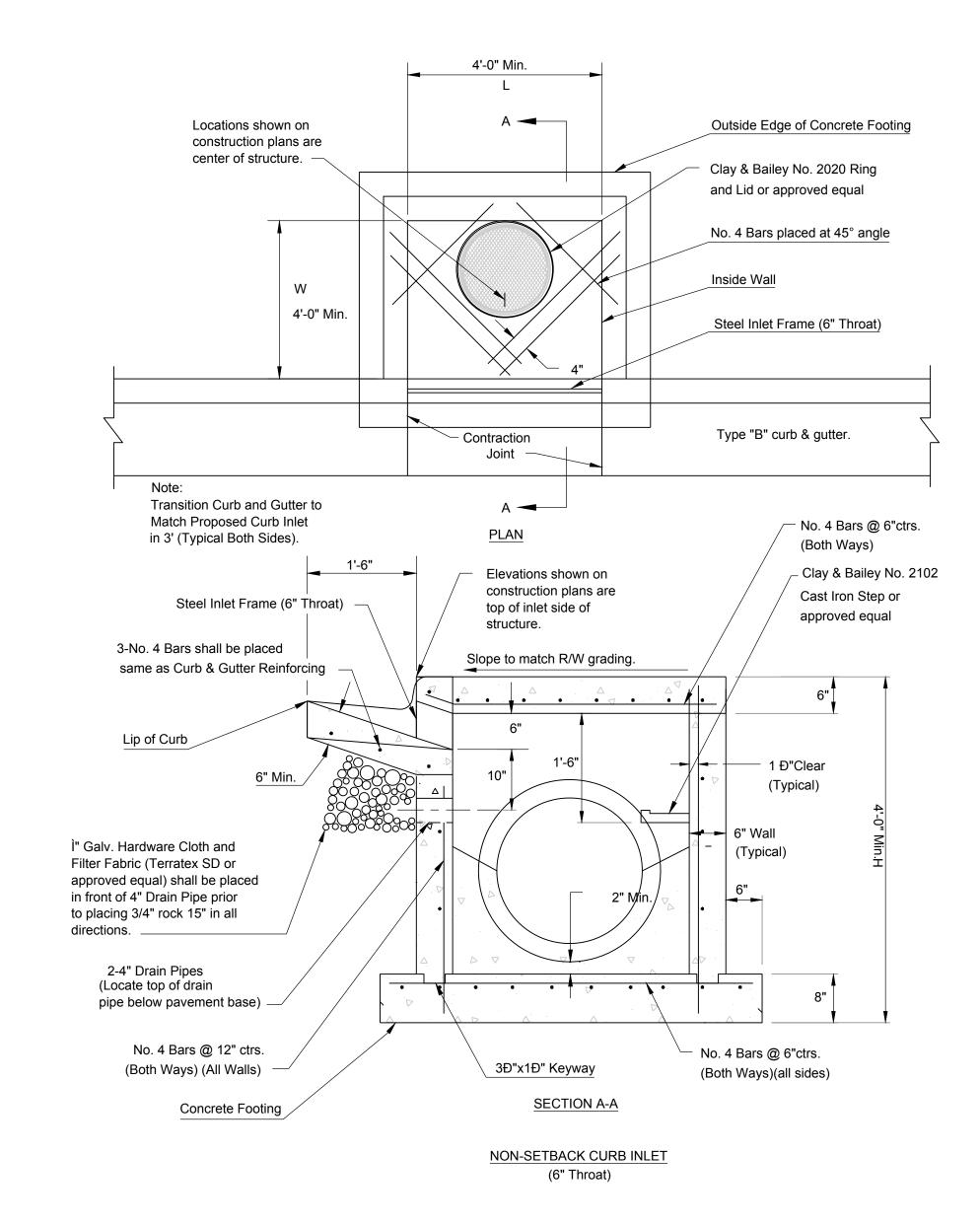
OF 10

TYPICAL CONCRETE PAVEMENT - JOINT DETAILS









#### NOTES:

#### General

- 1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the city Engineer.
- 2. Pre-cast shop drawings are to be approved by the city Engineer Prior to casting.
- 3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the city Engineer prior to construction.
- 4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less then or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

#### Concrete

- 5. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, unless noted otherwise.
- 6. Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, unless noted otherwise.
- 7. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
- 8. Bevel all exposed edges with 3/4" triangular molding.

#### Reinforcing Steel

- 9. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
- 10. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.
- 11. All lap splices not shown shall be a minimum of 40 bar diameters in
- 12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
- 13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

#### Construction

- 14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
- 15. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
- 16. Material selection and compaction requirements for backfill around structures shall be as specified in the project manual.

NON-SETBACK CURB INLET

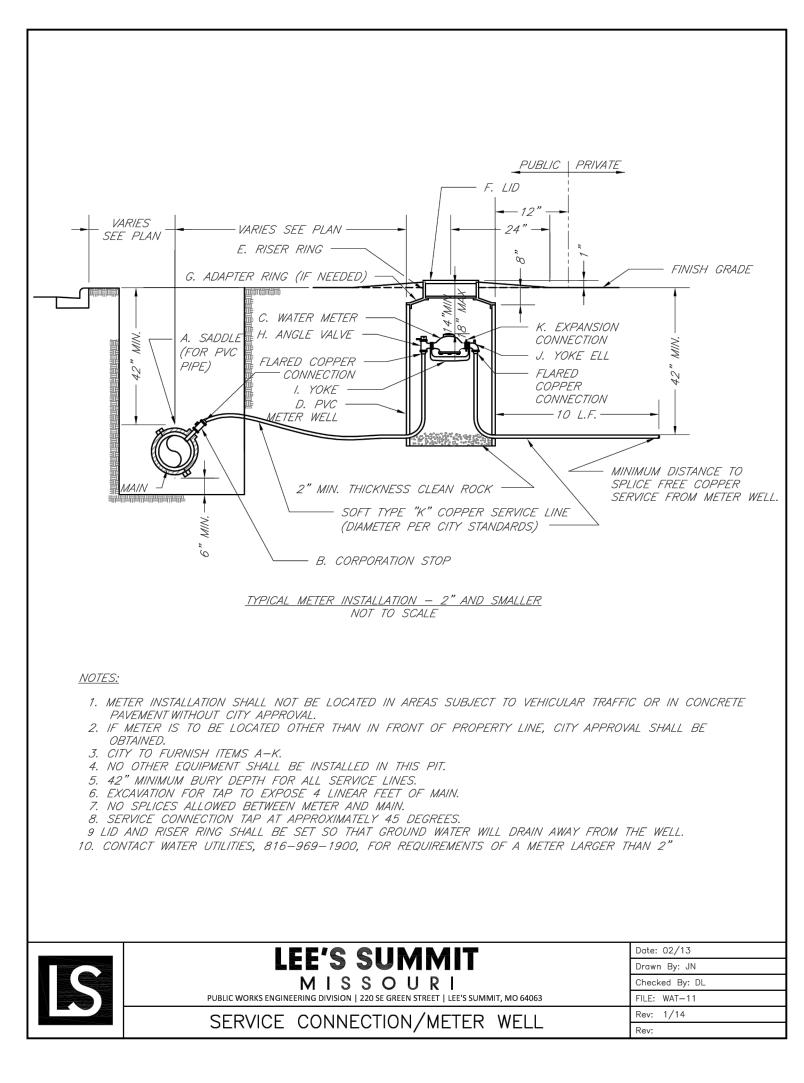
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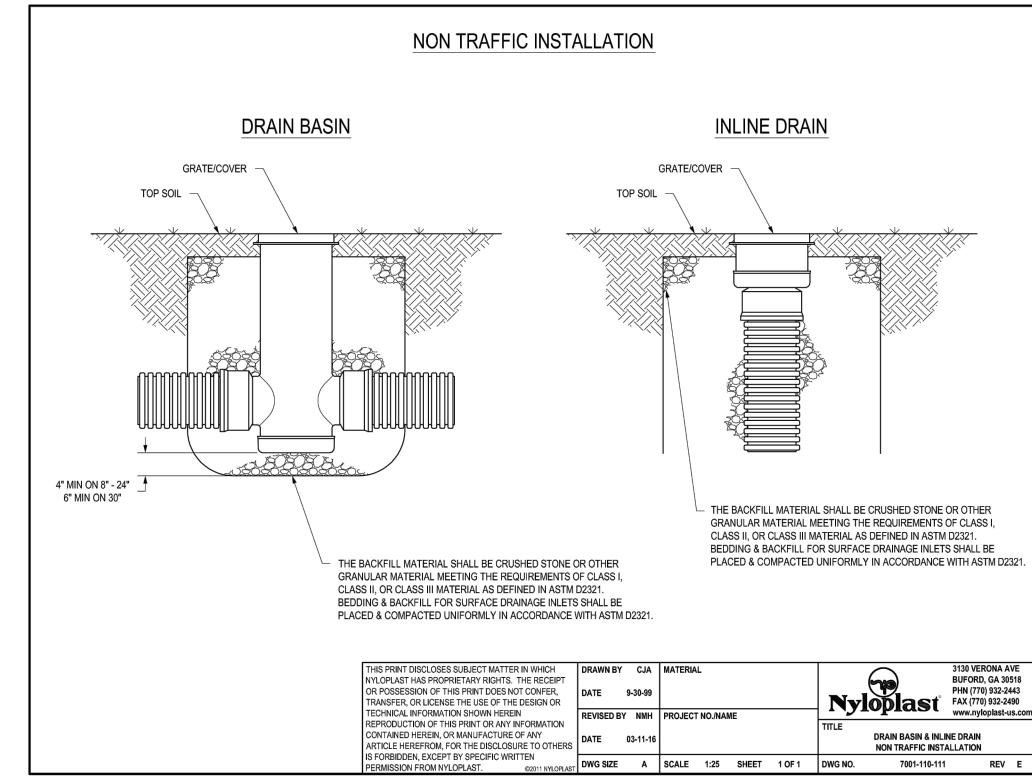
Г Ш П EW LONGVIE DEVELOPA

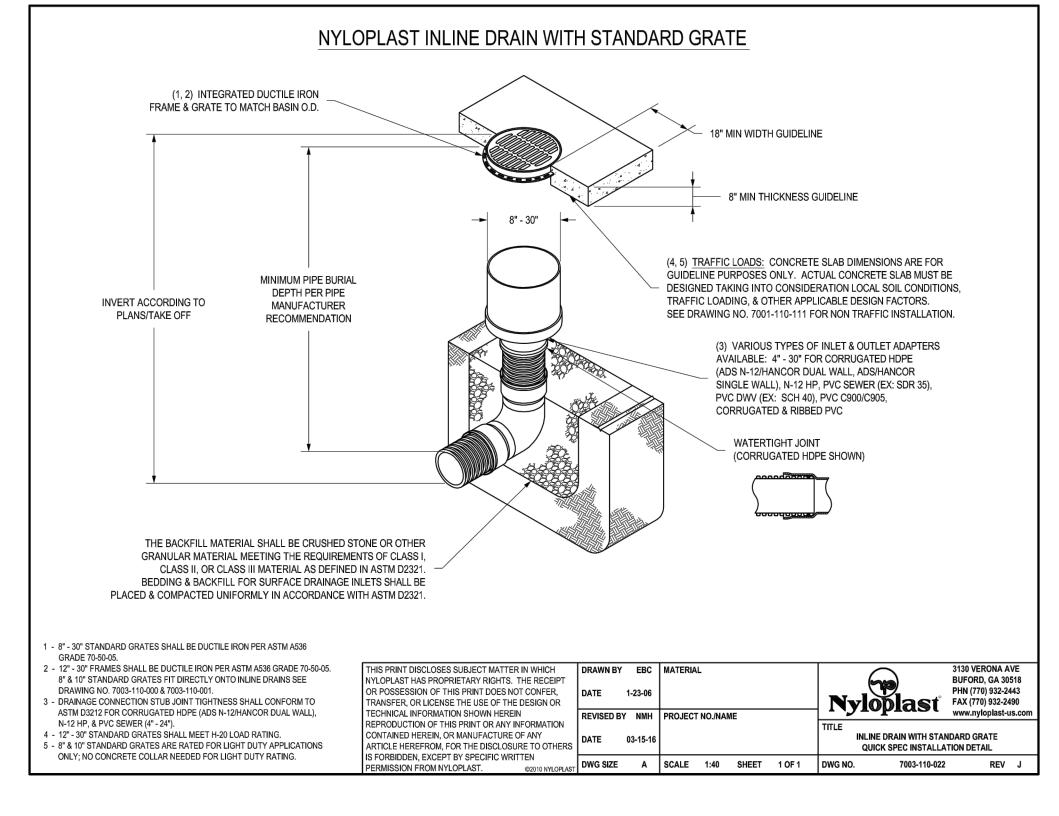
UTILITY DETAILS

SHEET

OF 10







Engineers• Planners•Surveyors•Landscap 14920 West 107th Street • Lenexa, Kansas (913) 492-5158 • Fax: (913) 492-8400 www.SCHLAGELASSOCIATES.CON

NEW LONGVIEW LOT 7 FINAL DEVELOPMENT PLANS

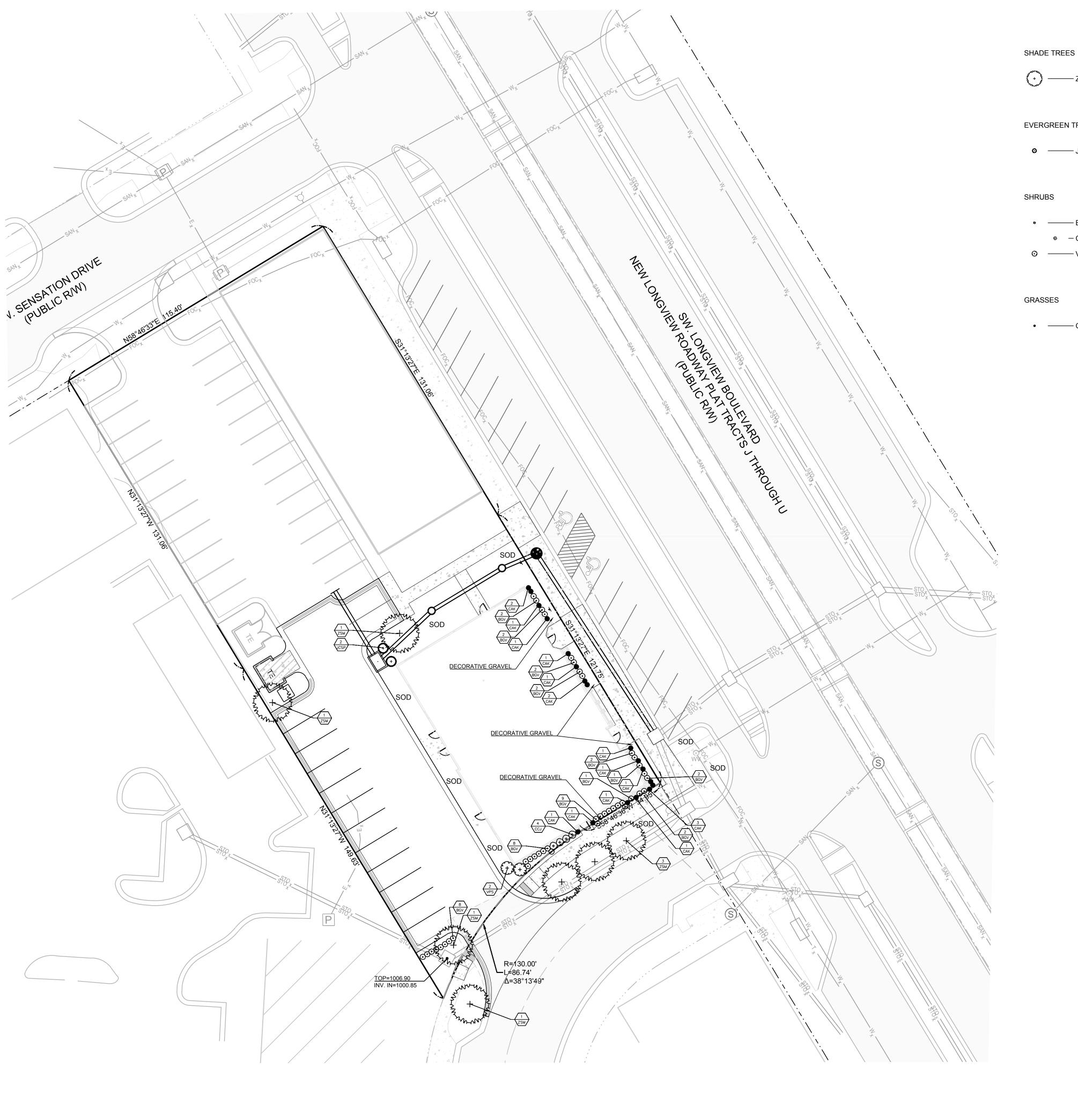
LONGVIEW

20

UTILITY DETAILS

SHEET

C10



Zelkova serrata 'Musashino' Musashino Columnar Zelkova 2.5" Cal. B&B **EVERGREEN TREES** Spartan Juniper Juniperus chinensis 'Spartan' SHRUBS Green Velvet Boxwood Buxus x 'Green Velvet' 5 gal. ● CCJ Cont. Caryopteris x clandonensis 'Janice' PPAF Lil Miss Sunshine™ Bluebeard 5 gal. 5 gal. Cont. Viburnum plicatum tomentosum 'Summer Snowflake' Summer Snowflake Viburnum

Karl Foerster Grass Calamagristis x acutifolia 'Karl Foerster' 2 gal.

- 1. UTILITY INFORMATION SHOWN IS DESIGNED LOCATION OR LOCATIONS BASED ON UTILITY LOCATES. AS BUILT LOCATIONS MAY VARY. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO COMMENCING LANDSCAPE INSTALLATION. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS OR
- 2. QUANTITIES INDICATED ON THE PLAN ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES THE PLAN QUANTITIES AND NUMBER OF SYMBOLS SHALL SUPERSEDED QUANTITIES IN THE SCHEDULE 3. ALL PLANT MATERIAL SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS(EXCEPT SIZE MODIFICATIONS ALLOWED BY THE PLAN APPROVAL) AND ANSI A60.1 THE AMERICAN STANDARD FOR
- 4. ALL PLANTS SHALL MEET THE SIZE REQUIREMENTS OF THE LEE'S SUMMIT ORDINANCE EXCEPT AS ALLOWED BY MODIFICATION AS PART OF THIS PLAN APPROVAL. ALL TREES SHALL BE CALLIPERED AND UNDERSIZED TREES SHALL BE REJECTED.
- 5. ALL SHRUBS TO BE UTILIZED FOR SCREENING SHALL BE 24" HEIGHT AT TIME OF PLANTING. 6. ALL PLANTING BEDS CONTAINING SHRUBS, GROUND COVER, PERENNIALS, ANNUALS SHALL BE IN A
- PLANTING BED WITH 3" MIN. DEPTH OF MULCH AND A "V-CUT" EDGE.
- 7. ALL TREES SHALL HAVE A MIN. 3 FT. DIA. AREA THAT HAS 3" MIN. DEPTH OF WOOD MULCH. 8. ALL TURF AREAS SHALL BE SODDED UNLESS INDICATED ON THE PLANS. 9. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN SHALL REQUIRE WRITTEN APPROVAL OF THE
- LANDSCAPE ARCHITECT AND THE CITY OF LEE'S SUMMIT, PRIOR TO INSTALLATION.
- 10. THE LANDSCAPE ARCHITECT AND OWNER SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SODDING OPERATIONS. 11. INSTALLATION AND MAINTENANCE OF LANDSCAPING SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT
- 12. ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A MINIMUM CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT OF 1 FT. FOR PERENNIALS AND GROUNDCOVER AND 1.5 FT. FOR SHRUBS. A 2 FT. CLEARANCE(4 FEET FROM BACK OF CURB TO THE CENTER OF SHRUB)FOR CAR OVERHANG IS REQUIRED
- AT ALL PARKING ISLANDS AND PERIMETERS. 13. AFTER COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND SOD THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT THAT THE WORK IS COMPLETE AND READY FOR REVIEW. THE LANDSCAPE ARCHITECT SHALL REVIEW THE LANDSCAPE INSTALLATION TO DETERMINE COMPLIANCE WITH THE APPROVED PLANS. WHEN THE LANDSCAPE INSTALLATION MEETS THE REQUIREMENTS OF THE APPROVED PLAN, THE LANDSCAPE ARCHITECT SHALL PROVIDE A SIGNED AND SEALED LETTER TO THE CITY STATING
- THAT ALL LANDSCAPE PLANTINGS HAVE BEEN INSTALLED PER THE APPROVED PLAN. 14. ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT (MECHANICAL, ELECTRICAL AND/OR TELEPHONE CABINETS), TRANSFORMERS, AIR CONDITIONING UNITS, ETC. SHALL BE SCREENED FROM PUBLIC VIEW BY INSTALLING FIVE SEA GREEN JUNIPERS EVENLY SPACED AROUND THE PERIMETER. FINAL LOCATION OF ANY EQUIPMENT SHALL BE DETERMINED AND VERIFIED WITH THE FINAL DESIGN AND PERMITTING OF THE PROJECT.
- 15. ALL ROOFTOP EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW WITH AN ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING AND INTEGRAL TO THE OVERALL APPEARANCE OF THE

IEW LC

LANDSCAPE PLAN

SHEET

Daniel G. Foster Landscape Architect MO# LA-2001001877

SCALE: 1" = 20'

NO SCALE

- TREE FLARE TO BE AT SAME ELEVATION OR SLIGHTLY HIGHER THAN SURROUNDING GRADE DO NOT COVER -FLARE WITH MULCH - ROOT FLARE BURLAP ROOT -CAREFULLY REMOVE ANY SOIL IN THE ROOT BALL ABOVE THE FLARE. DO NOT DAMAGE TRUNK

TYP. TREE PLANTING DEPTH

NO SCALE

/- CUT & REMOVE BURLAP FROM TOP 1/3 OF BALL IF TREE IS DELIVERED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN A MINIMUM OF 4 PLACES AND FOLD DWON SO THAT THE BASKET IS A MINIMUM OF 12" BELOW THE TRUNK FLARE. TREES STAKING METHOD TO BE DETERMINED BY CONTRACTOR. ANY TREES NOT PLUMB AT FINAL INSPECTION WILL BE REQUIRED TO BE RETURNED TO PLUMB BEFORE APPROVED. STAKES SHALL BE REMOVED NO LATER THAN ONE YEAR AFTER PLANTING AND PRIOR TO FINAL ACCEPTANCE. - UNEXCAVATED OR TAMPED FIRM BASE FOR SETTING ROOTBALL - 3" MIN. SPECIFIED MULCH. DO NOT PLACE MULCH AGAINST TREE TRUNK - SPECIFIED BACKFILL MIXTURE FOR FULL DEPTH OF ROOTBALL FROM CURB TO CURB - 12 INCHES MIN. SPECIFIED BACKFILL MIXTURE TO BE PLACED IN THE ENTIRE ISLAND CROWN GRADE IN CENTER. SLOPE TO DRAIN TOWARD CURB CONTRACTOR TO REMOVE ALL DEBRIS, CONCRETE SLAG/WASTE, CLAY WITHIN ENTIRE ISLAND AREA

ROOT BALL

TYP. PARKING LOT ISLAND PLANTING

PRUNE DAMAGED OR DEAD WOOD IMMEDIATELY PRIOR TO PLANTING. NEVER LEAVE "V" CROTCHES OR DOUBLE LEADER

- PROVIDE PROTECTION OF TREE TRUNK WHERE TREE TIES CONNECT

- TREE TIE METHOD TO BE DETERMINED BY CONTRACTOR

- TREE WRAP TO BE USED AT CONTRACTORS DISCRETION

- PLANT TREE 2" HIGHER THAN SURROUNDING GRADE. THE TRUNK FLARE SHALL BE VISIBLE ABOVE THE GROUND. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT PLACE BACKFILL ON TOP OF ROOT BALL.

- 3" MIN. SPECIFIED MULCH RING WITH MINIMUM RADIUS OF 2.5 INCHES FROM TREE TRUNK AND A "V" CUT EDGE AT MULCH EDGE

- CUT & REMOVE BURLAP FROM TOP 1/3 OF BALL IF TREE IS DELIVERED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN A MINIMUM OF 4 PLACES AND FOLD DWON SO THAT THE BASKET IS A MINIMUM OF 12" BELOW THE TRUNK FLARE.

- SPECIFIED BACKFILL MIXTURE

DO NOT PRUNE LEADER

- CONTINUOUS SAUCER, RIM FOR WATER & MULCH

INSTALL TREE PER TYP. DECIDUOUS TREE AND GUYING DETAIL

PLANT TREE 2" HIGHER THAN THE HIGHEST CURB ELEVATION.

BE REJECTED. DO NOT PLACE BACKFILL ON TOP OF ROOT BALL.

EXISTING UNDISTURBED SUBSOIL

THE TRUNK FLARE SHALL BE VISIBLE ABOVE THE GROUND. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL

- "V" CUT EDGE

TREES STAKING METHOD TO BE DETERMINED BY CONTRACTOR. ANY TREES NOT PLUMB AT FINAL INSPECTION WILL BE REQUIRED TO BE RETURNED TO PLUMB BEFORE APPROVED. STAKES SHALL BE REMOVED NO LATER THAN ONE YEAR AFTER PLANTING AND PRIOR TO FINAL ACCEPTANCE.

UNEXCAVATED OR TAMPED FIRM BASE FOR SETTING ROOTBALL

- EXISTING UNDISTURBED SUBSOIL

1/2 DIA. OF BALL

TYP. DECIDUOUS PLANTING & GUYING

CENTER IN ISLAND

1. All trees shall comply with State and Federal regulations. Trees should be obtained from local sources but must meet the quality quidelines herein. Trees transported from out of the region shall meet all State and Federal regulations and be certified to be disease and insect free.

2. Provide healthy stock, grown in a nursery and reasonably free of die-back, disease, insects, eggs, bores, and larvae. At the time of planting all plants shall have a root system, stem, and branch form that will not restrict normal growth, stability and health for the expected life of the plant.

3. All trees shall be nursery-grown.

4. Plants shall be healthy with the color, shape, size and distribution of trunk, stems, branches, buds and leaves normal to the plant type specified. Tree quality above the soil line shall comply with

5. Crown: The form and density of the crown shall be typical for a young specimen of the species or cultivar pruned to a central and dominant leader.

6. Crown specifications do not apply to plants that have been specifically trained in the nursery as topiary, espalier, multi-stem, clump, or unique selections such as contorted or weeping cultivars. 7. Leaves: The size, color, and appearance of leaves shall be typical for the time of year and stage of growth of the species or cultivar. Trees shall not show signs of prolonged moisture stress or over watering as indicated by wilted, shriveled, or dead leaves.

8. Branches: Shoot growth (length and diameter) throughout the crown should be appropriate for the age and size of the species or cultivar. Trees shall not have dead, diseased, broken, distorted, or otherwise injured branches.

a.) Main branches shall be distributed along the central leader not clustered together. Potential main branches shall be evenly spaced and have appropriate space between them. They

shall form a balanced crown appropriate for the cultivar/species.

b.) Branch diameter shall be no larger than two-thirds (one-half is preferred) the diameter of the central leader measured 1 inch above the branch union.

c.) The attachment of the largest branches (scaffold branches) shall be free of included bark.

d.) Branches shall be distributed radially around and vertically along the trunk, forming a generally symmetrical crown typical for the species. e.) The attachment of scaffold branches shall be free of included bark.

9. Branch structure: The better quality, large-maturing shade trees (lower extreme left) have all branches less than about two-thirds the trunk diameter. Poor quality shade trees (lower left center) have larger upright branches. Trees such as crape myrtle and other small-maturing trees can have several trunks. Trees with extensive defects in branches such as cracks and included bark (lower right) represent lesser quality than trees free of these potential problems. Included bark can be seen between the two arrows below. Branches with bark inclusions are weakly attached to

10. Evergreen branch structure: The branch pattern should dense, symmetrical and the branch stems should be evenly spaced completely around the trunk. The branches shall extend to within 12 inches of the ground and be along the full length of the trunk. Trees which are not symmetrical or that have an "open area" will be rejected. For structural integrity on evergreen trees, all side branches should be less than half the diameter of the adjacent trunk (less than one-third is preferred).

11. Trunk: The tree trunk shall be relatively straight, vertical, and free of wounds that penetrate to the wood (properly made pruning cuts, closed or not, are acceptable and are not considered wounds), sunburned areas, conks (fungal fruiting bodies), wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties, or lesions (mechanical injury).

12. Evergreen tree trunk: Evergreen trees shall have a single trunck that isstraight, vertical, and free of wounds that penetrate to the wood (properly made pruning cuts, closed or not, are acceptable and are not considered wounds), sunburned areas, conks (fungal fruiting bodies), wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties, or lesions (mechanical injury). Codominant trunks (trunks of similar size) will not be accepted.

13. Temporary branches, unless otherwise specified, can be present along the lower trunk below the lowest main (scaffold) branch, particularly for trees less than 1 inch in caliper. These branches should be no greater than 3/8-inch diameter. Clear trunk should be no more than 40% of the total height of the tree.

14. Central Leader: Trees shall have a single(one), relatively straight central leader and tapered trunk, free of co-dominant stems and vigorous, upright branches that compete with the central leader. Preferably, the central leader should not have been headed. However, in cases where the original leader has been removed, an upright branch at least ½ (one-half) the diameter of the original leader just below the pruning point shall be present. All trees are assumed to have one central leader trees unless a different form is specified in the plant list or drawings. If the central leader is broken or damaged during delivery or installation the tree shall be rejected and removed from the site. If the central leader dies wihin the warranty period the tree shall be replaced at the end of the warranty period.

15. All graft unions, where applicable, shall be completely closed without visible sign of graft rejection. All grafts shall be visible above the soil line. 16. Trunk caliper and taper shall be sufficient so that the lower five feet of the trunk remains vertical without a stake. Auxiliary stake may be used to maintain a straight leader in the upper half of the

17. Plant roots shall be normal to the plant type specified. Root observations shall take place without impacting tree health. Root quality at or below the soil line shall comply with the project Root

Acceptance details and the following: 18. The roots shall be reasonably free of scrapes, broken or split wood.

19. The root system shall be reasonably free of injury from biotic (e.g., insects and pathogens) and abiotic (e.g., herbicide toxicity and salt injury) agents. Wounds resulting from root pruning used to produce a high quality root system are not considered injuries.

20.A minimum of three structural roots reasonably distributed around the trunk (not clustered on one side) shall be found in each plant. Root distribution shall be uniform throughout the root ball, and

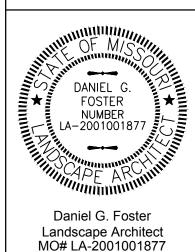
growth shall be appropriate for the species. 21.Plants with structural roots on only one side of the trunk (J roots) shall be rejected.

22. The root collar shall be within the upper 1 inch of the substrate/soil. Two structural roots shall reach the side of the root ball near the top surface of the root ball. The grower may request a modification to this requirement for species with roots that rapidly descend, provided that the grower removes all stem girdling roots above the structural roots across the top of the root ball. Any excess soil shall be removed from the root ball so that the root flare is visible as indicated in the "Planting Depth Detail". The root collar shall be visible above the mulch layer. 23. The root system shall be free of stem girdling roots over the root collar or kinked roots from nursery production practices.

24.Plant Grower Certification: The final plant grower shall be responsible to have determined that the plants have been root pruned at each step in the plant production process to remove stem girdling roots and kinked roots, or that the previous production system used practices that produce a root system throughout the root ball that meets these specifications. Regardless of the work of previous growers, the plant's root system shall be modified at the final production stage, if needed, to produce the required plant root quality. The final grower shall certify in writing that all plants are reasonably free of stem girdling and kinked roots as defined in this specification, and that the tree has been grown and harvested to produce a plant that meets these specifications.

25. At time of observations and delivery, the root ball shall be moist throughout. Roots shall not show signs of excess soil moisture conditions as indicated by stunted, discolored, distorted, or dead





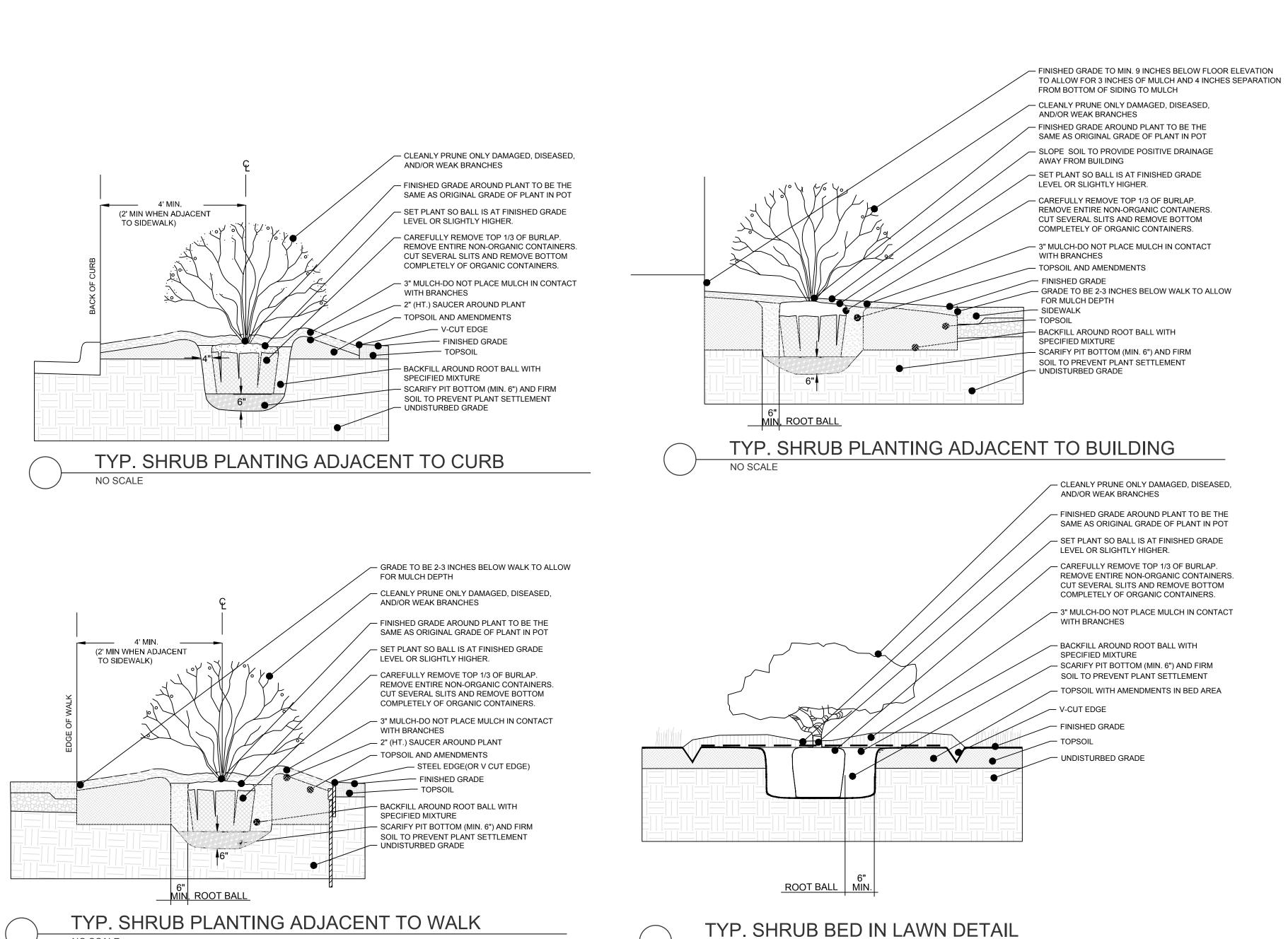
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LANDSCAPE DETAILS

SHEET

PLAN REDIEW/BID PLANS



NO SCALE

- CLEANLY PRUNE ONLY DAMAGED, DISEASED,

- FIRM SOIL AROUND EACH PLANT ROOT MASS

- CAREFULLY REMOVE ENTIRE CONTAINER.

GENTLY LOOSEN ANY TANGLE ROOTS

— SET PLANT SO THE TOP OF THE BASE IS LEVEL

- 3" MULCH-DO NOT PLACE MULCH IN CONTACT

WITH THE FINISHED GRADE OR SLIGHTLY HIGHER.

NO SCALE

AND/OR WEAK BRANCHES

WITH BRANCHES

- UNDISTURBED GRADE

EDGING

TOPSOIL

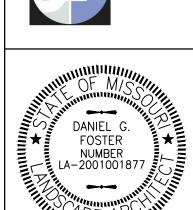
FINISH GRADE

- TOPSOIL AND AMENDMENTS

SPACING AS SHOWN
ON CHART

NO SCALE

TYP. ANNUAL/PERENNIAL PLANTING



Daniel G. Foster Landscape Architect MO# LA-2001001877

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LANDSCAPE

DETAILS

PLAN REVIEW/BID PLANS