

February 17, 2017

**ADDENDUM #2
8TH STREET ROAD IMPROVEMENT PROJECT
CITY OF CHATTANOOGA CONTRACT # T-16-014-201**

- Item #1.** Clarification: Details #4, #5 & #6 on Sheet C-12 reflect the full-depth concrete pavement specifications to be encountered on the 8th Street project. These details provide the concrete thicknesses based upon the underlying pavement material encountered after milling/demolition activities have been completed. While field conditions may cause variations in the pavement thicknesses based upon the above reference details, for purposes of providing a lump sum amount for the concrete work, please use the following pavement recommendations:
- Concrete Paving for On-Street Parking with Integral Coloring:
 - 5" thick concrete pavement including integral coloring & tooled joint scoring, complete-in-place, per City of Chattanooga City Code Section 32-287 as required and/or as specified.
 - Concrete Paving for Roadway with Integral Coloring:
 - 6" thick concrete pavement including integral coloring & tooled joint scoring, complete-in-place, per City of Chattanooga City Code Section 32-287 as required and/or as specified.
 - Concrete Paving for Intersections with Integral Coloring & Stamping:
 - 10" thick concrete pavement including integral coloring, stamping & tooled joint scoring, complete-in-place, per City of Chattanooga City Code Section 32-287 as required and/or as specified.
- Item #2.** Clarification: The lump sum amount for storm drainage shall include the price of Polydrain trench drains and grates. There is also a unit price line item under the storm drainage section to include a price per linear foot for the Polydrain trench drain and grate system.
- Item #3.** Clarification: The contractor shall be responsible for raising/lowering the encountered utility valve boxes/covers, manhole lids, access panels, meter boxes and/or other utility appurtenances within the project area as required to match the finished grade elevations reflected on the plans. The contractor will need to coordinate with the utility companies accordingly when adjusting said appurtenances.
- Item #4.** Clarification: An electrical conduit plan for the supply to the proposed pedestrian lighting will be provided by EPB once the contract is awarded. Light pole foundations, electrical pull boxes and conduit shall adhere to City Standard Detail # SD-507.01. There shall also be a concrete collar around the electrical pull boxes to with color (if applicable) to match the color of the concrete and/or pavers surrounding the box per City Standard Detail # SD-501.03.
- Item #5.** Clarification: A full-depth asphalt pavement section was reflected on Sheet C-13 as part of Addendum #1. Finished grade elevations and/or storm drainage installation may require full-depth paving. Limits of full-depth pavement shall be determined in the field by contractor and

confirmed by the Engineer. Please see the enclosed revised bid schedule to reflect the revised unit price line item for full-depth pavement specification.

- Item #6.** Clarification: While we do not anticipate encountering mass rock during this project, please provide a unit price per cubic yard for rock excavation as indicated under the Grading Section of the bid schedule in the event rock is encountered.
- Item #7.** Clarification: Unsuitable soils (as determined by the Engineer) shall be removed and suitable soils imported shall be compacted in place as required. The lump sum amount shall not include these line items. Please provide unit pricing for both the removal of unsuitable soils and import of suitable soils in the appropriate section of the bid schedule. Please note, all other imported fill required for the project as shown shall be included as part of the grading lump sum amount.
- Item #8.** Clarification: The contractor shall provide an allowance not to exceed \$35,000 for the purchase and proper installation of the proposed furnishing items identified on the Site Furnishings Plan as the City is working to provide appropriate specifications for all furnishing items. Once specified by CDOT, the contractor shall coordinate accordingly with CDOT regarding the purchase and installation of said furnishings.
- Item #9.** Clarification: It is understood that the pavement thicknesses indicated on the contract documents may not all meet the City's standard concrete pavement thicknesses. Pavement thicknesses are reflective of the competent underlying material encountered after milling/demolition and are as specified by the geotechnical engineer. See also Item #1 – this addendum
- Item #10.** Clarification: There will be no pavement striping as part of the scope of this project.
- Item #11.** Clarification: Contractors shall provide a lump sum cost for traffic controls necessary to perform the work as indicated on the contract documents. The awarded contractor shall coordinate with Rick Davis of the Chattanooga Department of Transportation to prepare a Traffic Control Plan to implement prior to beginning work.
- Item #12.** Clarification: We are presently working to coordinate with the City of Chattanooga Dept. of Public Works to verify the scope of demolition services that will be provided by the City. The City's scope will be outlined in Addendum #3 to be issued.
- Item #13.** Clarification: Per the specifications and contract documents, the electrical contractor involved in removing the existing traffic signal shall be Level 3 IMSH certified as required by the Chattanooga Department of Transportation.
- Item #14.** Confirmation: City Council is anticipated to award the project at the 02/28/17 meeting.
- Item #15.** Replace Bid Schedule (originally included in the Contract Documents & Specifications dated 01/13/17) with the enclosed revised Bid Schedule. Note the revisions consist of:

- Addition of Demolition/Removal lump sum item as indicated on page 00301-2.
- Addition of unit price line item to account for import of stone backfill to replace excavated unsuitable soils as indicated on page 00301-2.
- Amending unit price line item to specify the import of suitable soil material to replace excavated unsuitable soils as indicated on page 00301-2.
- Amending line item description for the Excavation of Unsuitable Soils as indicated on page 00301-2.
- Amending Temporary Traffic Control line item description as indicated on page 00301-2.
- Addition of unit price line item to account for the conversion of existing storm drainage structures to junction boxes as indicated on page 00301-3.
- Amending Standard Full-Depth Pavement Section line item description as indicated on page 00301-5.
- Amending Landscaping line item description as indicated on page 00301-5.

Item #16. Replace Sheet C-11 – Erosion Control Plan (Originally dated 01/13/17) – with attached Sheet C-11 – Erosion Control Plan (Revision #1 dated 02/16/17). Note the revisions consist of:

- Reflecting erosion controls to be implemented along 8th Street.

Item #17. Replace Sheet C-12 – Site Details (Originally dated 01/13/17) – with attached Sheet C-12 – Site Details (Revision #2 dated 02/16/17). Note the revisions consist of:

- Revising details #4, #5 & #6 to reflect the concrete pavement to be installed per City Code Section 32-287.

Item #18. Replace Sheet C-13 – Site Details (Originally dated 01/13/17) – with attached Sheet C-13 – Site Details (Revision #2 dated 02/16/17). Note the revisions consist of:

- Amending Detail #9 to reflect the full-depth pavement section of 8/2.5/1.5 as indicated.


Item #19. Replace Sheet L-1 – Landscape Plan (Originally dated 01/13/17) – with attached Sheet L-1 – Landscape Plan (Revision #1 dated 02/16/17). Note the revisions consist of:

- Adding ground-level plantings to the tree wells along 8th Street and the planter beds on the north/south portions of the 8th/Pine Street Intersection. (Note: Plantings along Pine Street portion shall be completed by the Pine Street contractor and shall not be included in pricing for 8th Street work).

Item #20. Add Sheet L-1.1 – Landscape Details (Dated 02/16/17) to the plan set.

Should you have any questions regarding this information, please submit the required RFI to the City of Chattanooga Purchasing Department.

Sincerely,



Derek Blackwood, P.E.
MAP Engineers, LLC

BID SCHEDULE

8TH STREET ROAD IMPROVEMENT PROJECT

CONTRACT NUMBER T-16-014-201

CHATTANOOGA, TENNESSEE

DESCRIPTION

The project consists of the following major elements of construction including but not limited to improvements to storm drainage, intersection improvements, installation of concrete sidewalks and/or sidewalk pavers, installation of concrete pavement, asphalt overlay, coordination with utilities regarding water utility relocation and gas utility relocation, and landscaping installation.

TOTAL BASE BID

Total Base \$ _____

Note: Dollar amounts are to be shown in both words and figures. In case of discrepancy, dollar amounts shown in words will govern.

Contractor certifies that he has reviewed the plans and specifications, and that all items of work not specifically listed in the Bid Schedule are included in the prices for the various items listed on the Bid Schedule.

BIDDER:

DATE:

BY:

(Signature) TITLE:

ADDRESS:

CITY:

STATE:

ZIP CODE:

TELEPHONE NUMBER:

<p align="center">BID SCHEDULE 8th Street Road Improvement Project Contract No. T-16-014-201 City of Chattanooga, Tennessee</p>					
Spec. Sect. / Item No.	Description	Unit	Est. No. of Units	Unit Price	Total
717	Mobilization	LUMP SUM:			
15 / 23	Demolition/Removal (Complete as required and/or as specified for demolition activities not performed by the City Department of Public Works)	LUMP SUM:			
02220	Grading (Complete as required and/or as specified)	LUMP SUM:			
	Common Excavation as required and/or as specified.	CY	N/A		
	Rock Excavation as required and/or as specified	CY	N/A		
	Imported Fill Material (Suitable Soils), Including all required testing, transportation to site, installation and compaction to required specifications, complete-in-place as required and/or as specified.	CY	N/A		
	Imported Fill Material (stone backfill), As directed by the Geotechnical Engineer, Including all required testing, transportation to site, installation and compaction to required specifications, complete-in-place as required and/or as specified.	CY	N/A		
	Excavation of Unsuitable Soils (as determined by the Engineer) and Proper Offsite Disposal by the contractor as required.	CY	N/A		
98	Slope Protection and Erosion Control (Complete-in-place as required and/or as specified. Includes Cost of Maintenance during Construction)	LUMP SUM:			
16410	Temporary Traffic Control (Temporary Traffic Control Signs & Barricades, including installation and removal as required and/or as specified. Contractor to coordinate with Rick Davis of Chattanooga Dept. of Transportation as required to prepare and implement an acceptable Traffic Control Plan)	LUMP SUM:			

BID SCHEDULE

8th Street Road Improvement Project

Contract No. T-16-014-201

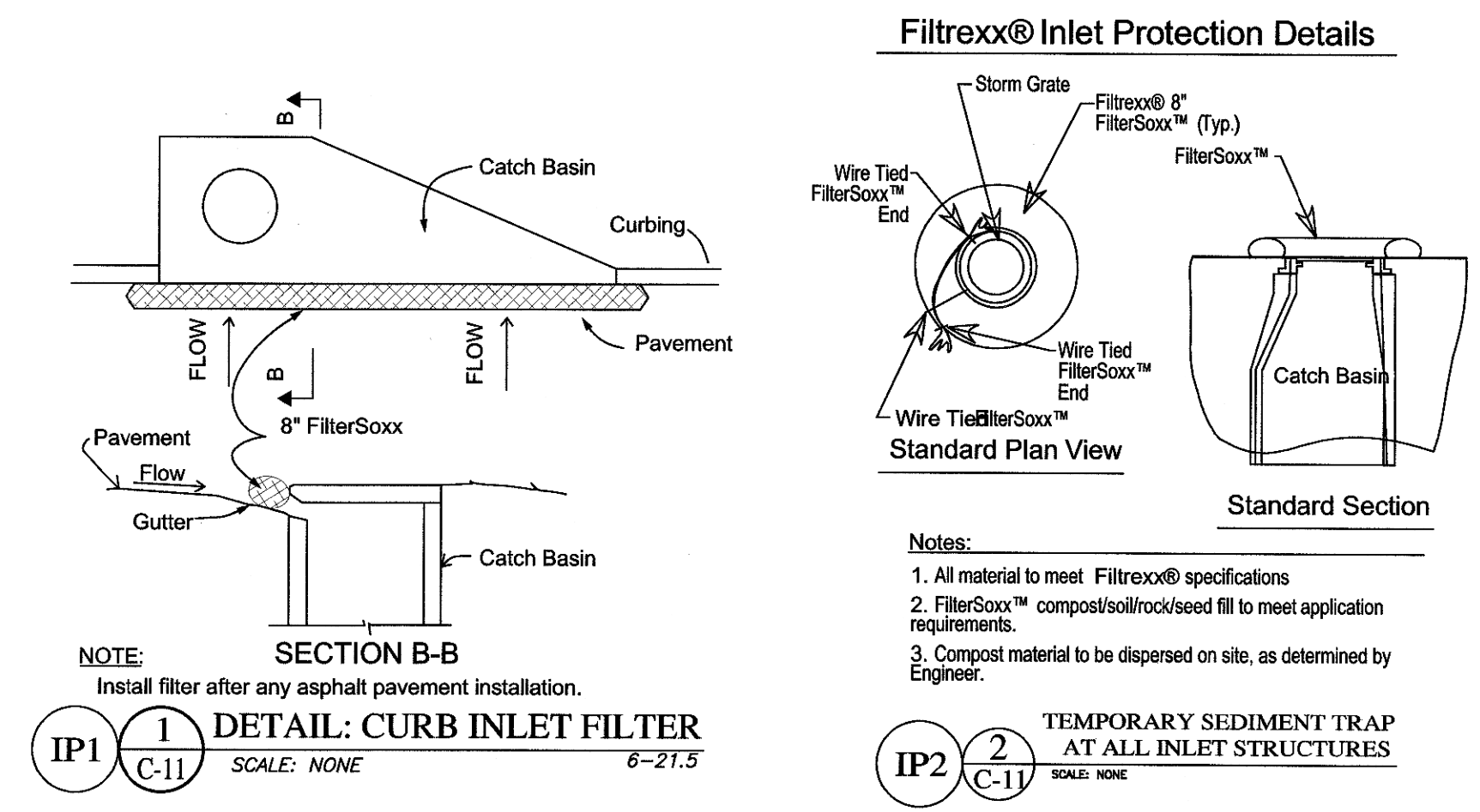
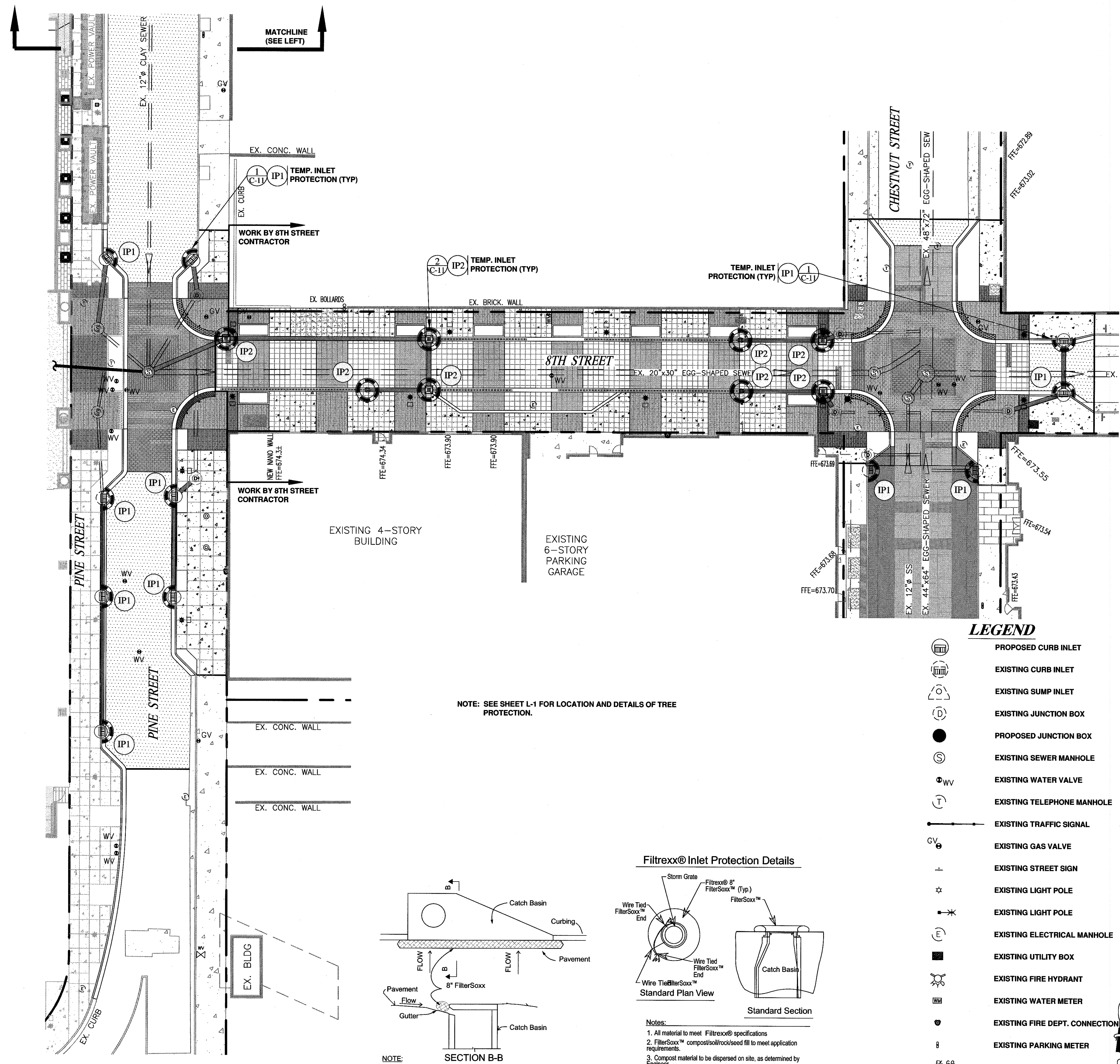
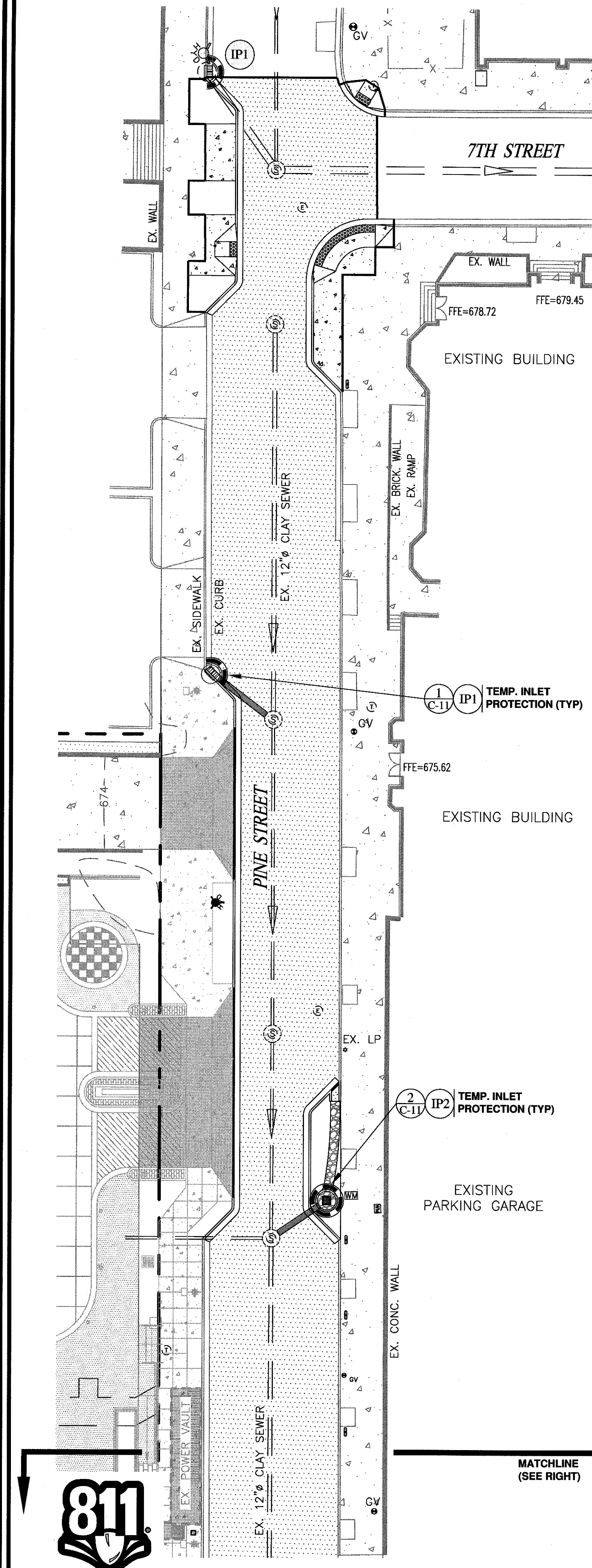
City of Chattanooga, Tennessee

Spec. Sect. / Item No.	Description	Unit	Est. No. of Units	Unit Price	Total
7 / 31 / 33 / 34 / 38 / 15062	Storm Drainage System (All structures & piping complete-in-place as required and/or as specified, Including Excavation, Butyl Rubber Gaskets, Fittings, Frames/Covers, Grates, Stone Bedding, Stone Backfill in Paved Areas to Subgrade, Modifications/Repairs to Existing Structures, etc.)	LUMP SUM:			
	4-Foot Diameter Curb Inlet				
	0 to 6.0 Feet Deep.	EA	N/A		
	6.1 to 8.0 Feet Deep.	EA	N/A		
	4-Foot Diameter Yard Inlet				
	0 to 6.0 Feet Deep.	EA	N/A		
	6.1 to 8.0 Feet Deep.	EA	N/A		
	4-Foot Diameter Junction Box				
	0 to 6.0 Feet Deep.	EA	N/A		
	6.1 to 8.0 Feet Deep.	EA	N/A		
	28-Inch Square Type "B" Inlet				
	0 to 6.0 Feet Deep.	EA	N/A		
	Form-in-place Drop Inlet				
	0 to 6.0 Feet Deep.	EA	N/A		
	Storm Pipes				
	0 to 6.0 Feet Deep (In Pavement)				
	15" Diameter RCP	LF	N/A		
	8" Diameter DIP	LF	N/A		
	Polydrain Trench Drains & Grates				
	Polydrain Trench Drains & Grates System, Complete-in-Place, as required and/or as specified.	LF	N/A		
	Modifications/Repairs to Existing Structures				
	Raise Existing Manhole, Inlet, or Catch Basin, including any repairs needed, Complete-in-Place, as required and/or as specified.	EA	N/A		
	Core Drilling Existing Manhole, Inlet, or Catch Basin, including any repairs needed, Complete-in-Place, as required and/or as specified.	EA	N/A		
	Convert Existing Curb Inlet Structure to Junction Box, including any repairs needed, Complete-in-Place, as required and/or as specified.	EA	N/A		

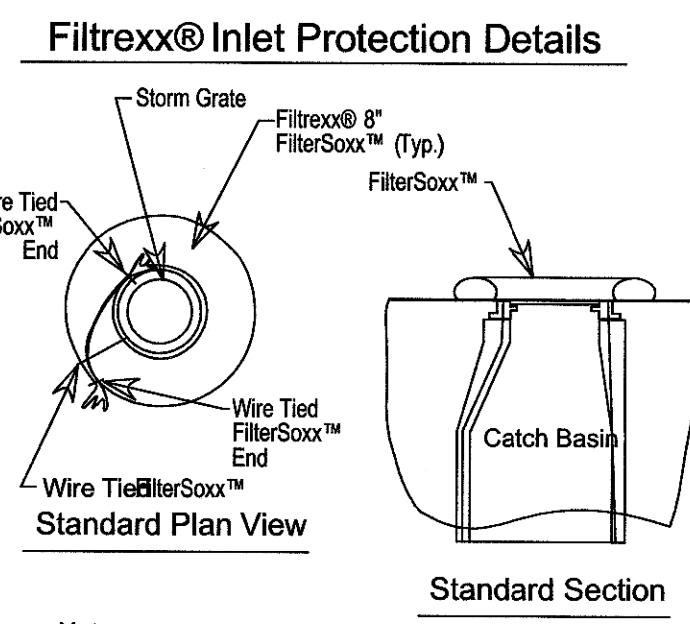
BID SCHEDULE 8th Street Road Improvement Project Contract No. T-16-014-201 City of Chattanooga, Tennessee					
Spec. Sect. / Item No.	Description	Unit	Est. No. of Units	Unit Price	Total
N/A	Coordination with Utility Companies For Relocation of Utilities and/or Raise Existing Utility Valve Covers (Contractor coordination with all Utility Companies for relocation of Gas, Electric, Water, Phone/Internet/Cable, etc. as required, and to include providing and maintaining sufficient construction staking for the above Utilities to install their mains/lines and/or conduit sleeving.)	LUMP SUM:			
	Raise Existing Utility Valve Covers, including any repairs needed, Complete-in-Place, as required and/or as specified.	EA	N/A		
03110 / 03240 / 03310 / 16 / 17 / 25 / 73 / Appendix	Concrete Formwork, Concrete Reinforcement, Cast In Place Concrete & Precast Concrete Pavers (Sidewalks, Driveways, Curb & Gutter, Handicap Ramps with Detectable Warning Pavers, Sidewalk Pavers) (Complete-in-place as required and/or as specified)	LUMP SUM:			
	4-Inch Thick Concrete Sidewalk, Including 2-Inches of No. 57 Stone, Complete-in-Place, as required and/or as specified.	SF	N/A		
	6-Inch Thick Concrete Driveway, Including 2-Inches of No. 57 Stone, Complete-in-Place, as required and/or as specified.	SF	N/A		
	Concrete Curb and Gutter "Type A", Including Drop Curb at Handicap Ramps, Driveways, Complete-in-Place, as required and/or as specified.	LF	N/A		
	18-Inch Wide Concrete Valley Gutter, Complete-in-Place, as required and/or as specified.	LF	N/A		
	6-Inch Wide Concrete Header Curb at Tree Wells, Complete-in-Place, as required and/or as specified.	LF	N/A		
	Concrete Paving for On-Street Parking with Integral Coloring				
	4-Inch Thick Plain Portland Cement Concrete Pavement with "Fibermesh" Including Integral Coloring, Complete-in-Place, as required and/or as specified.	SF	N/A		
	5-Inch Thick Plain Portland Cement Concrete Pavement with "Fibermesh" Including Integral Coloring, Complete-in-Place, as required and/or as specified.	SF	N/A		

BID SCHEDULE 8th Street Road Improvement Project Contract No. T-16-014-201 City of Chattanooga, Tennessee					
Spec. Sect. / Item No.	Description	Unit	Est. No. of Units	Unit Price	Total
	Concrete Paving for Roadway with Integral Coloring & Scoring				
	4-Inch Thick Plain Portland Cement Concrete Pavement with "Fibermesh" Including Integral Coloring & Scoring, Complete-in-Place, as required and/or as specified.	SF	N/A		
	6-Inch Thick Plain Portland Cement Concrete Pavement with "Fibermesh" Including Integral Coloring & Scoring, Complete-in-Place, as required and/or as specified.	SF	N/A		
	Concrete Paving for Intersections with Integral Coloring & Stamping				
	7-Inch Thick Plain Portland Cement Concrete Pavement with "Fibermesh" Including Integral Coloring & Scoring, Complete-in-Place, as required and/or as specified.	SF	N/A		
	10-Inch Thick Plain Portland Cement Concrete Pavement with "Fibermesh" Including Integral Coloring & Scoring, Complete-in-Place, as required and/or as specified.	SF	N/A		
12 / 21 / 22 / 25 / 26 / 27 / 53 / 67 / 73	Asphalt Paving (Complete-in-place as required and/or as specified.)	LUMP SUM:			
	Overlay - 1 1/2 of Asphaltic Concrete Surface Course , Grading E, (Includes Cost of Tack Coat), as required and/or as specified.	SY	N/A		
	Standard Full Depth Pavement Section (8/2.5/15) composed of: 1.5-Inches of Asphaltic Concrete Surface, Grading E, (Includes Cost of Tack Coat); 2.5-Inches of Asphaltic Concrete Binder, Grading BM or BM-2, (Includes Cost of Prime Coat); and 8-Inches of Mineral Aggregate Base, Type A, Grading D, complete-in-place as required and/or as specified on properly compacted subgrade.	SY	N/A		
02485 / 02810	Landscaping (Including Root Barriers, Trees, Shrubs & Ground-level plantings, Complete-in-place as required and/or as specified)	LUMP SUM:			
36	Topsoil in Landscaped Areas (Complete-in-place as required and/or as specified)	LUMP SUM:			

BID SCHEDULE 8th Street Road Improvement Project Contract No. T-16-014-201 City of Chattanooga, Tennessee					
Spec. Sect. / Item No.	Description	Unit	Est. No. of Units	Unit Price	Total
02452	Traffic Signs & Pavement Markings (Complete-in-place as required and/or as specified)	LUMP SUM:			
N/A	Pedestrian Lighting (Complete-in-place as required and/or as specified)	LUMP SUM:			
Total Lump Sum Base Bid: _____					



- LEGEND**
- PROPOSED CURB INLET
 - EXISTING CURB INLET
 - EXISTING SUMP INLET
 - EXISTING JUNCTION BOX
 - PROPOSED JUNCTION BOX
 - EXISTING SEWER MANHOLE
 - EXISTING WATER VALVE
 - EXISTING TELEPHONE MANHOLE
 - EXISTING TRAFFIC SIGNAL
 - EXISTING GAS VALVE
 - EXISTING STREET SIGN
 - EXISTING LIGHT POLE
 - EXISTING LIGHT POLE
 - EXISTING ELECTRICAL MANHOLE
 - EXISTING UTILITY BOX
 - EXISTING FIRE HYDRANT
 - EXISTING WATER METER
 - EXISTING FIRE DEPT. CONNECTION
 - EXISTING PARKING METER
 - EXISTING SEWER CLEANOUT
 - PROPOSED STREET SIGN
 - PROPOSED STREET LIGHT



- Notes:**
- All material to meet Filtrex® specifications
 - Filtrex® composite/soil/rock/seed fill to meet application requirements.
 - Compost material to be dispersed on site, as determined by Engineer.
- TEMPORARY SEDIMENT TRAP AT ALL INLET STRUCTURES**

Erosion Control Plan
SCALE: 1" = 20'



MAP ENGINEERS L.L.C.

Tel: (423) 855-5554
Fax: (423) 465-5110
7590 Applegate Lane
Chattanooga, TN 37421

**8TH STREET & PINE STREET
ROAD IMPROVEMENT PROJECT**

FOR:
**CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION**

EROSION CONTROL PLAN

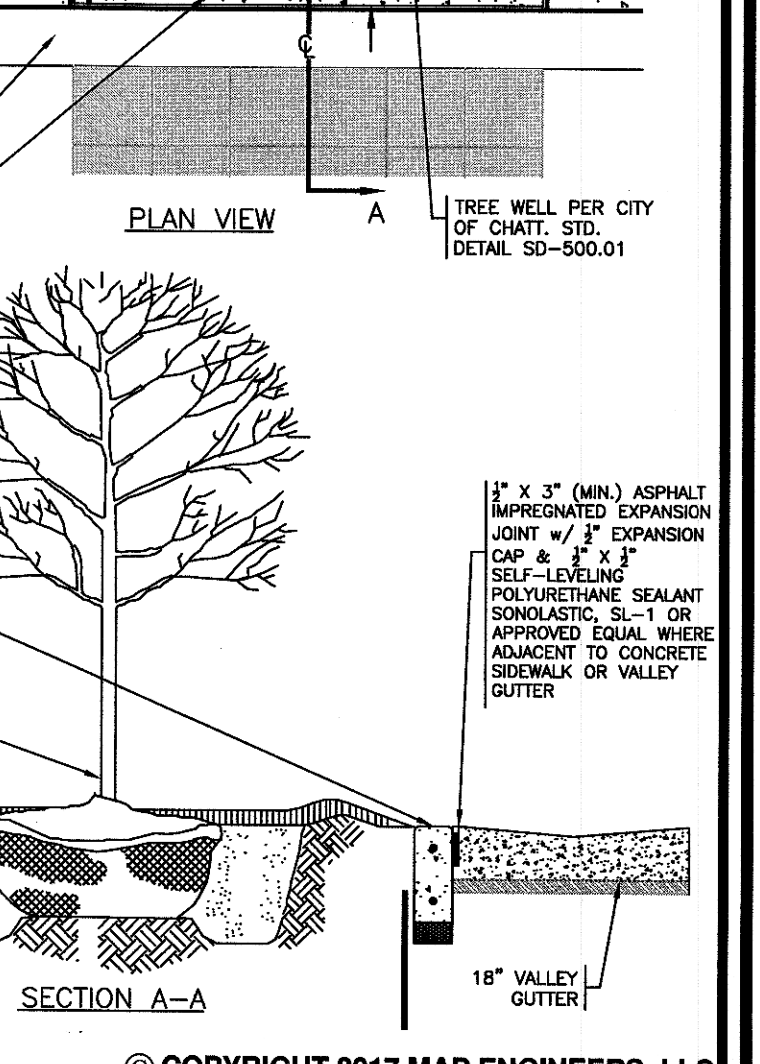
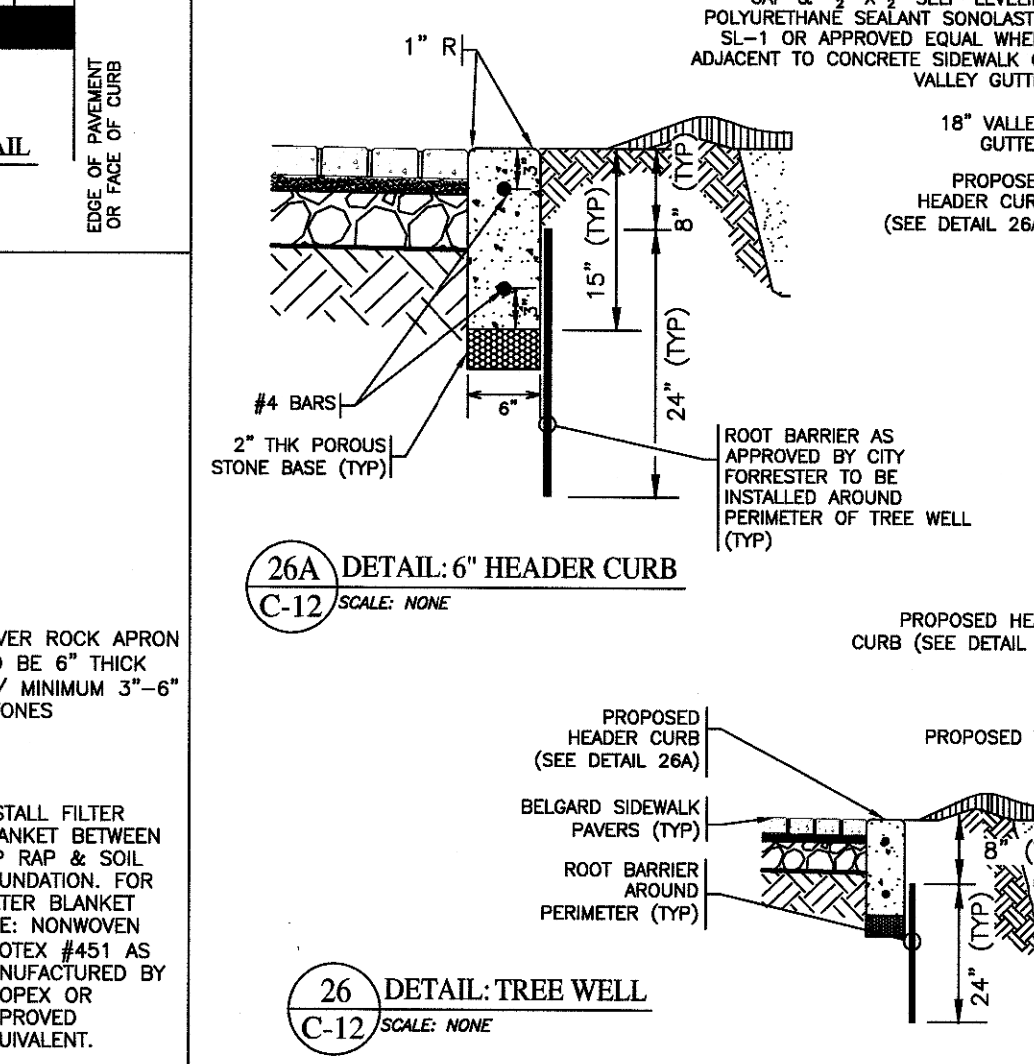
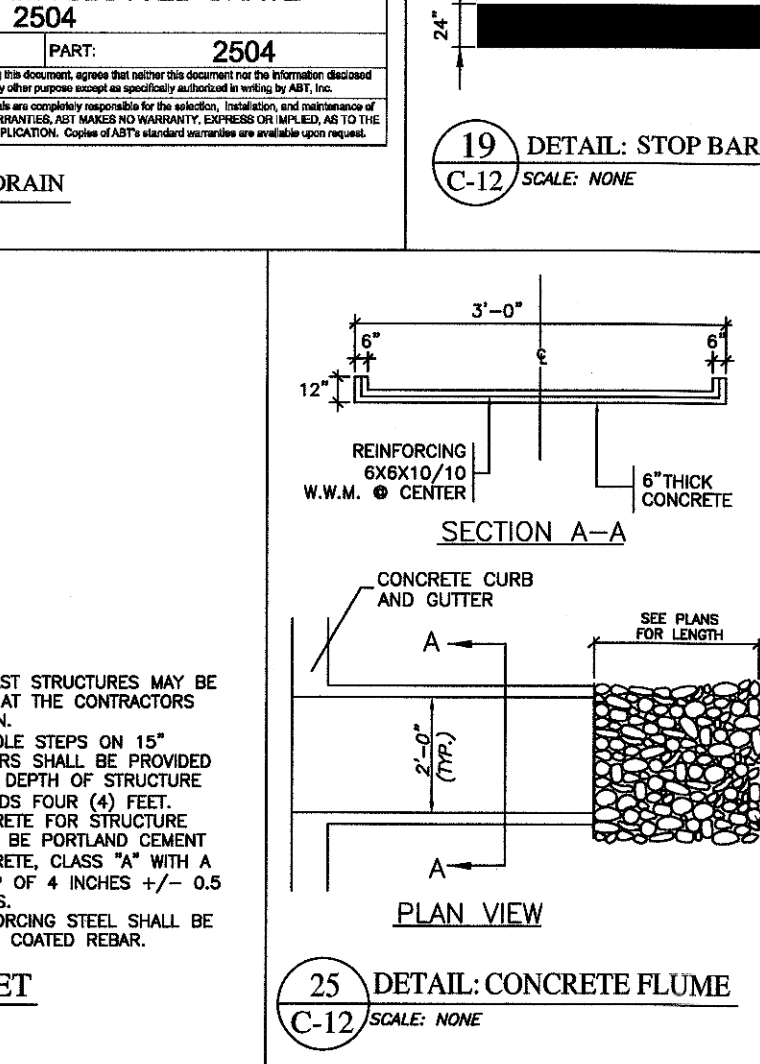
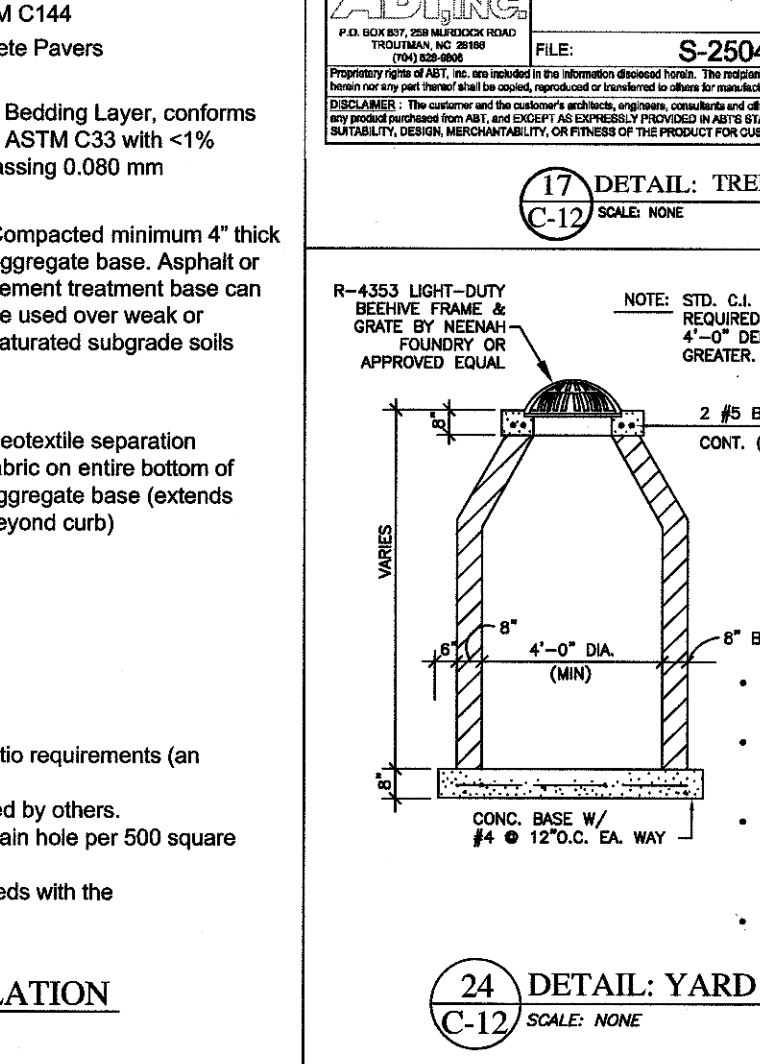
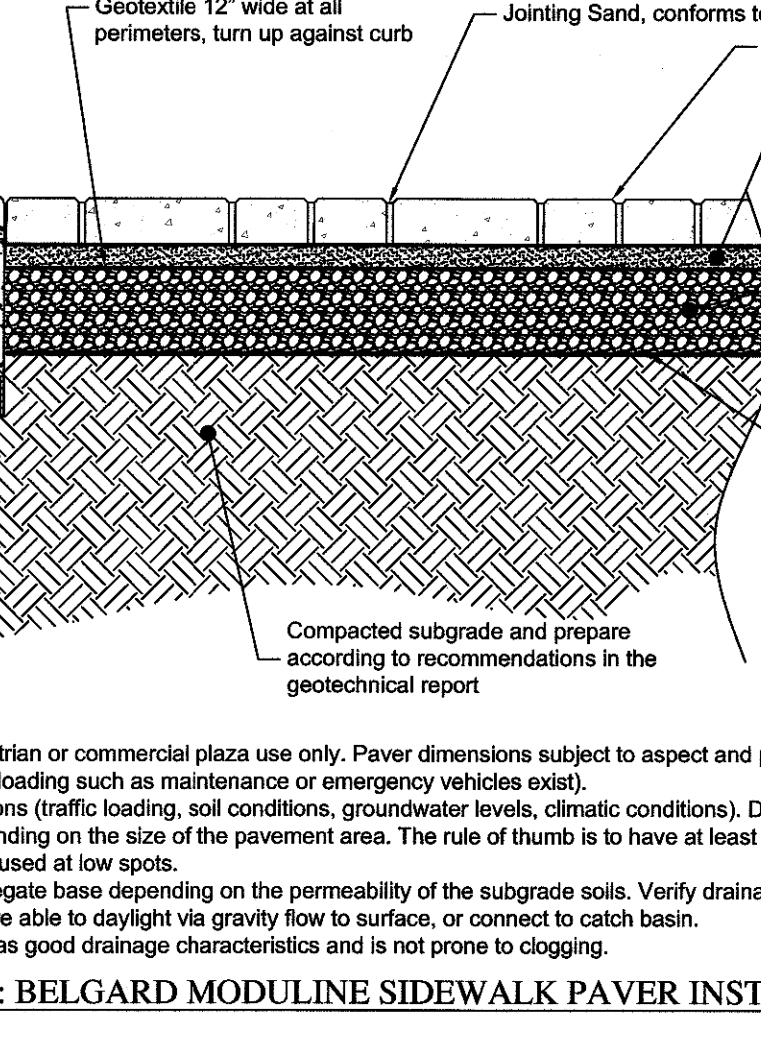
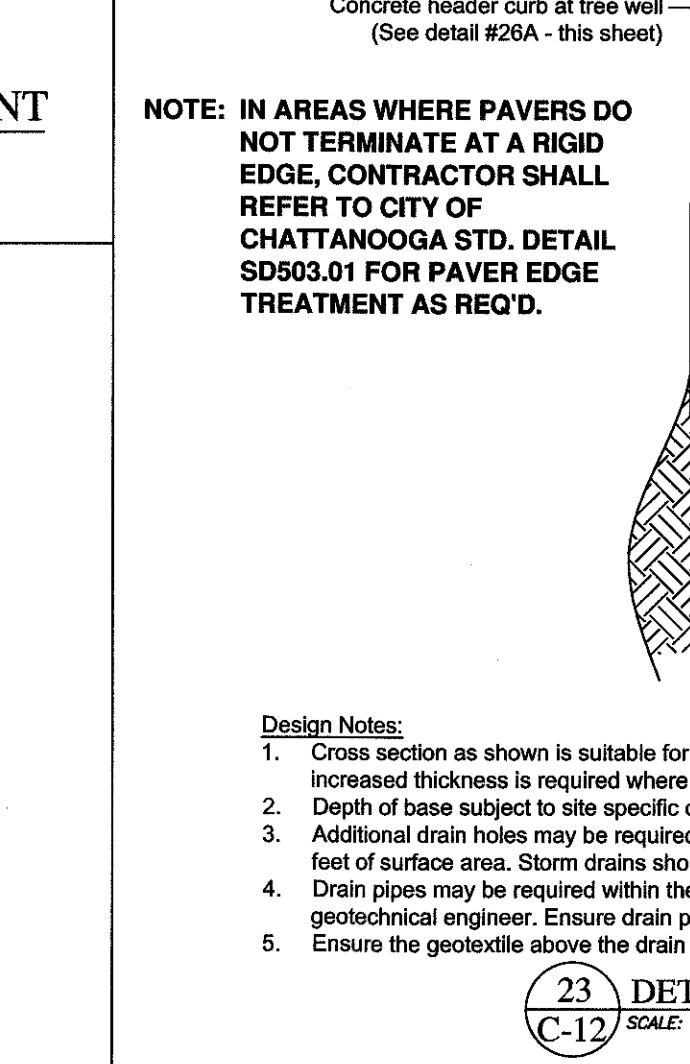
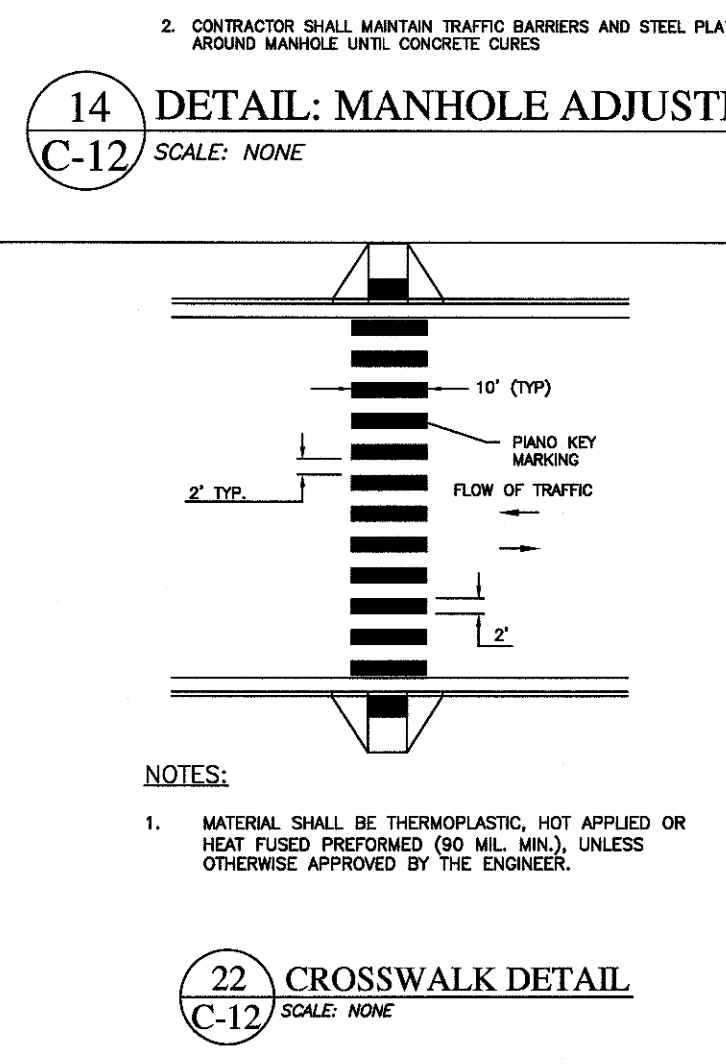
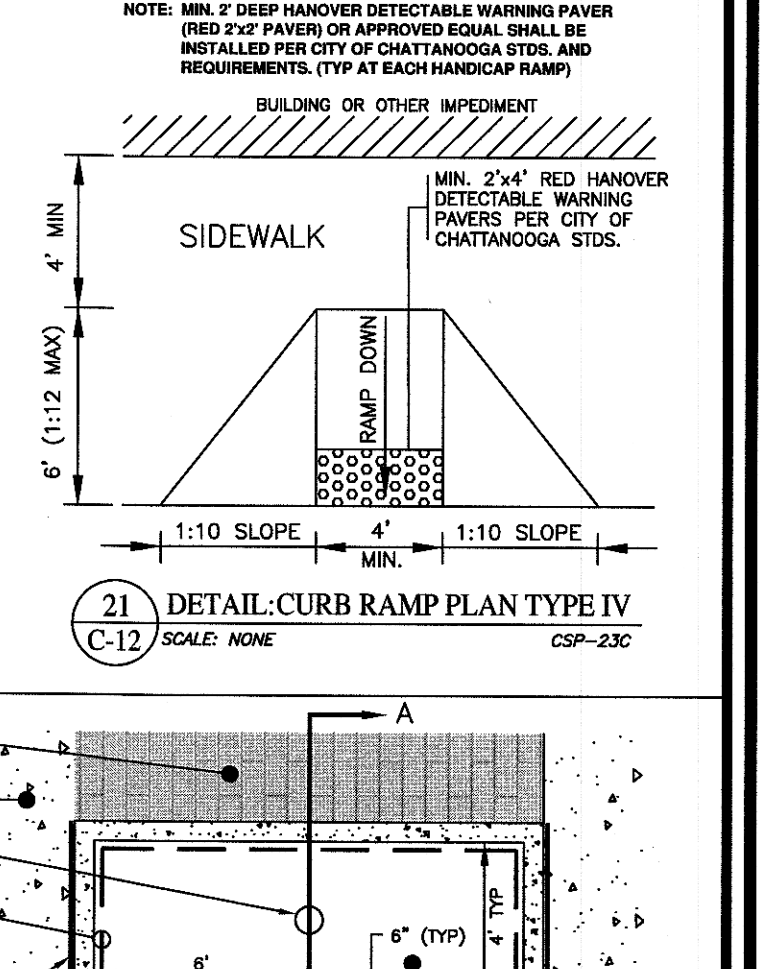
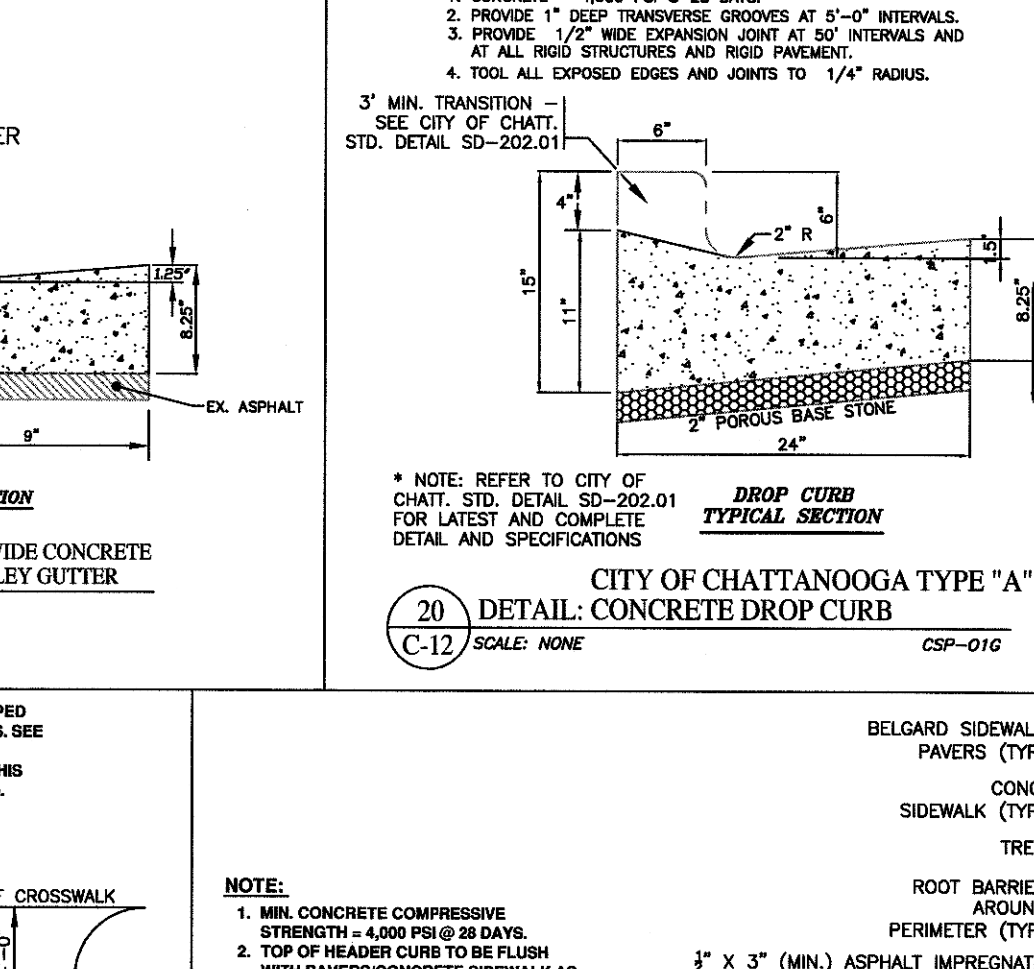
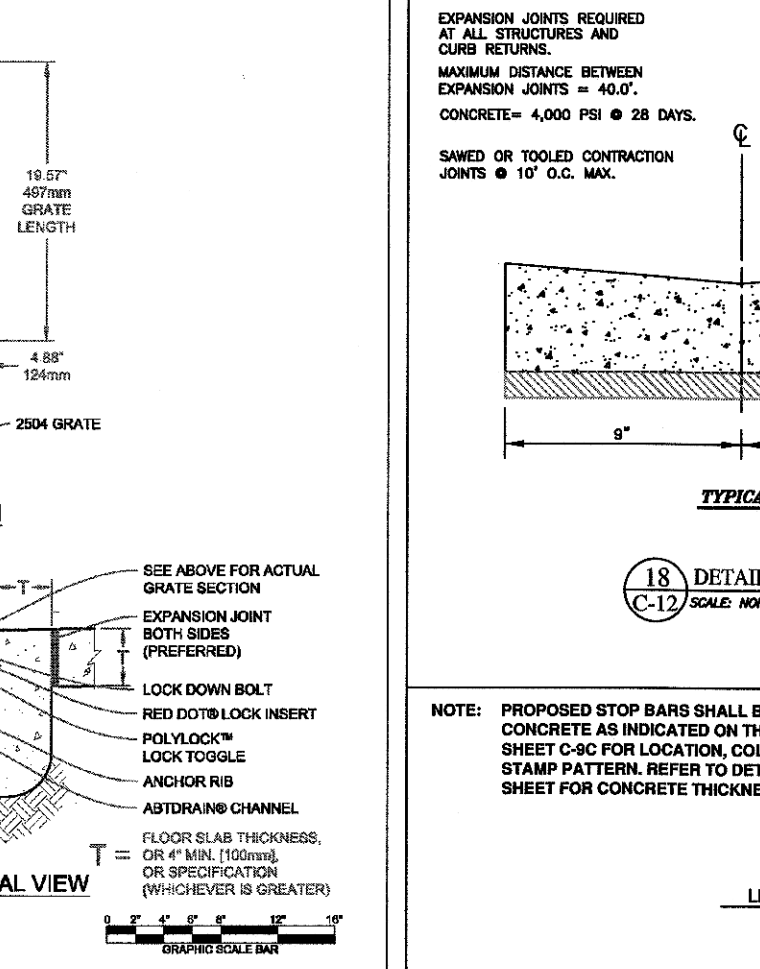
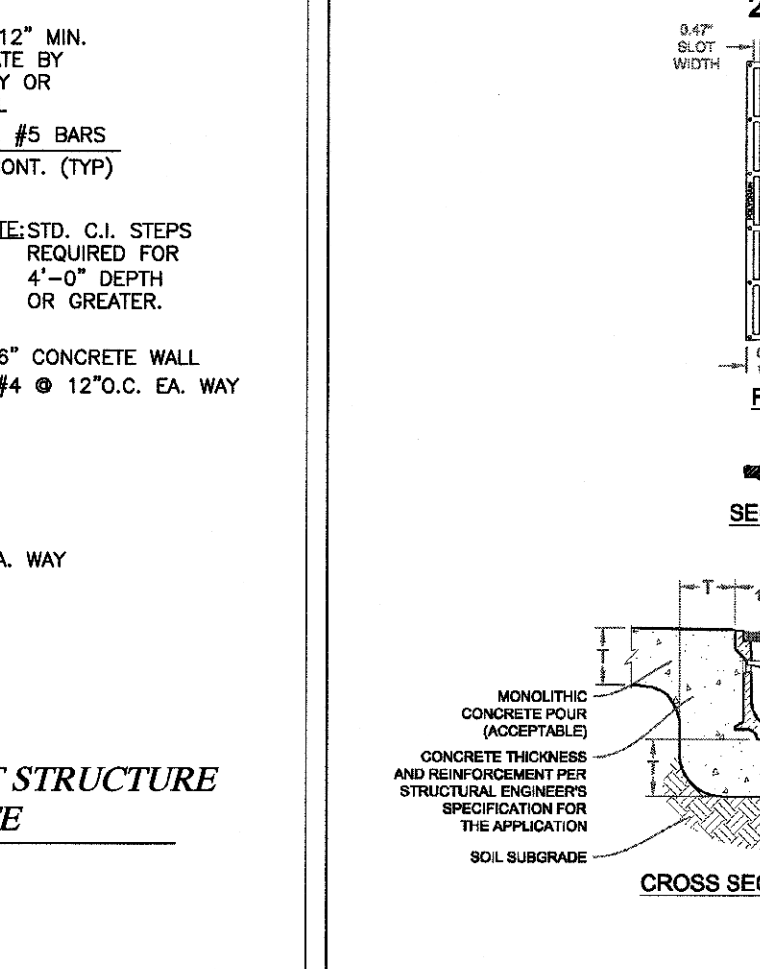
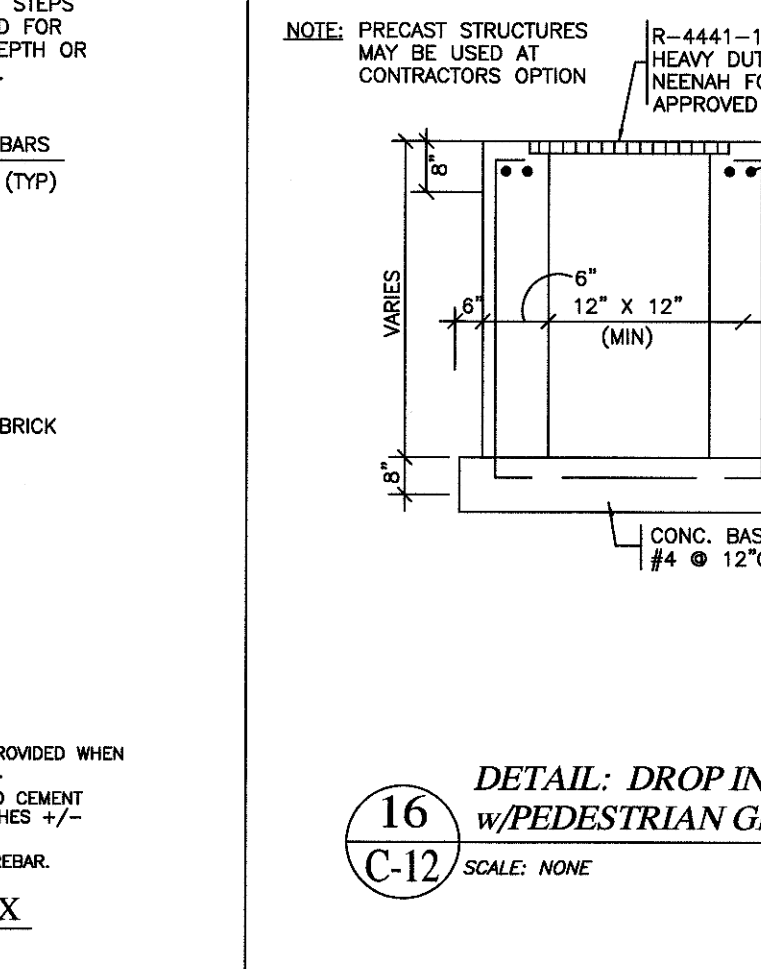
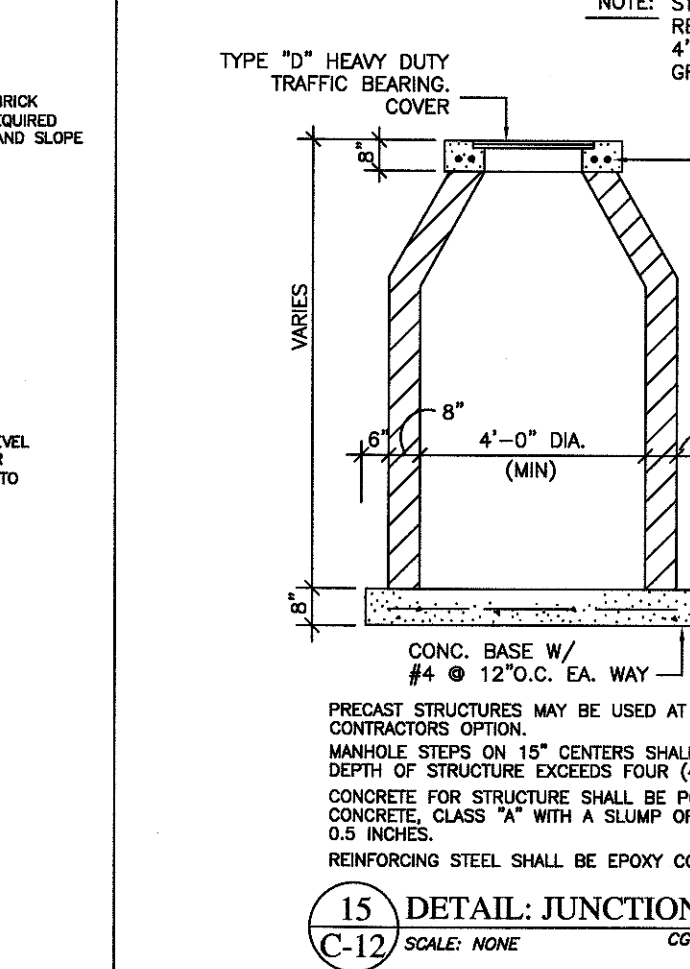
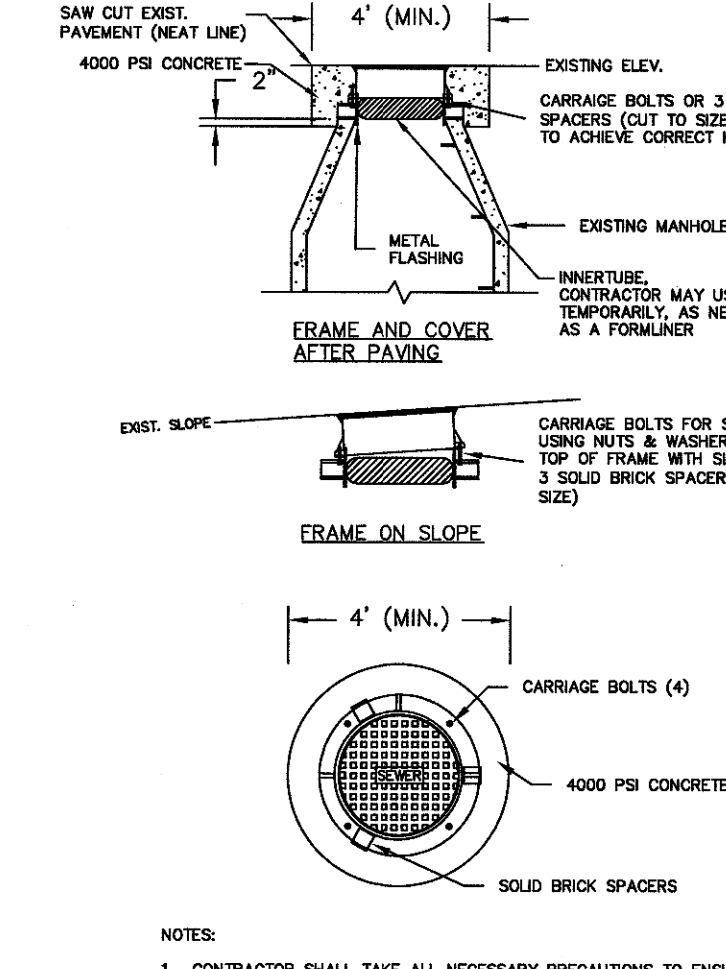
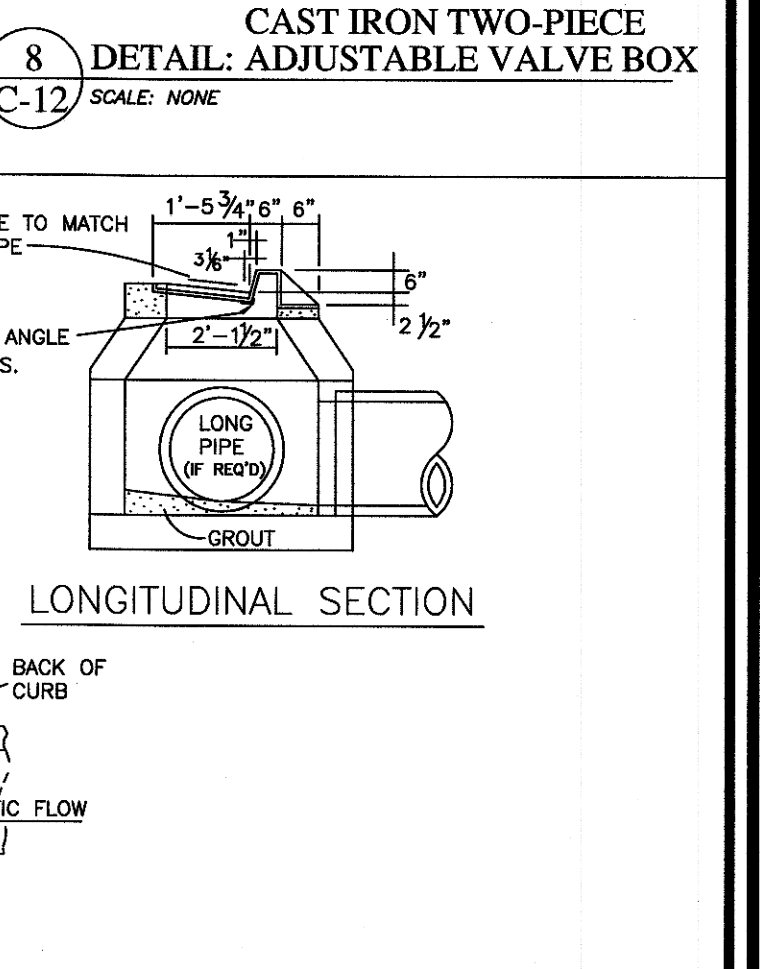
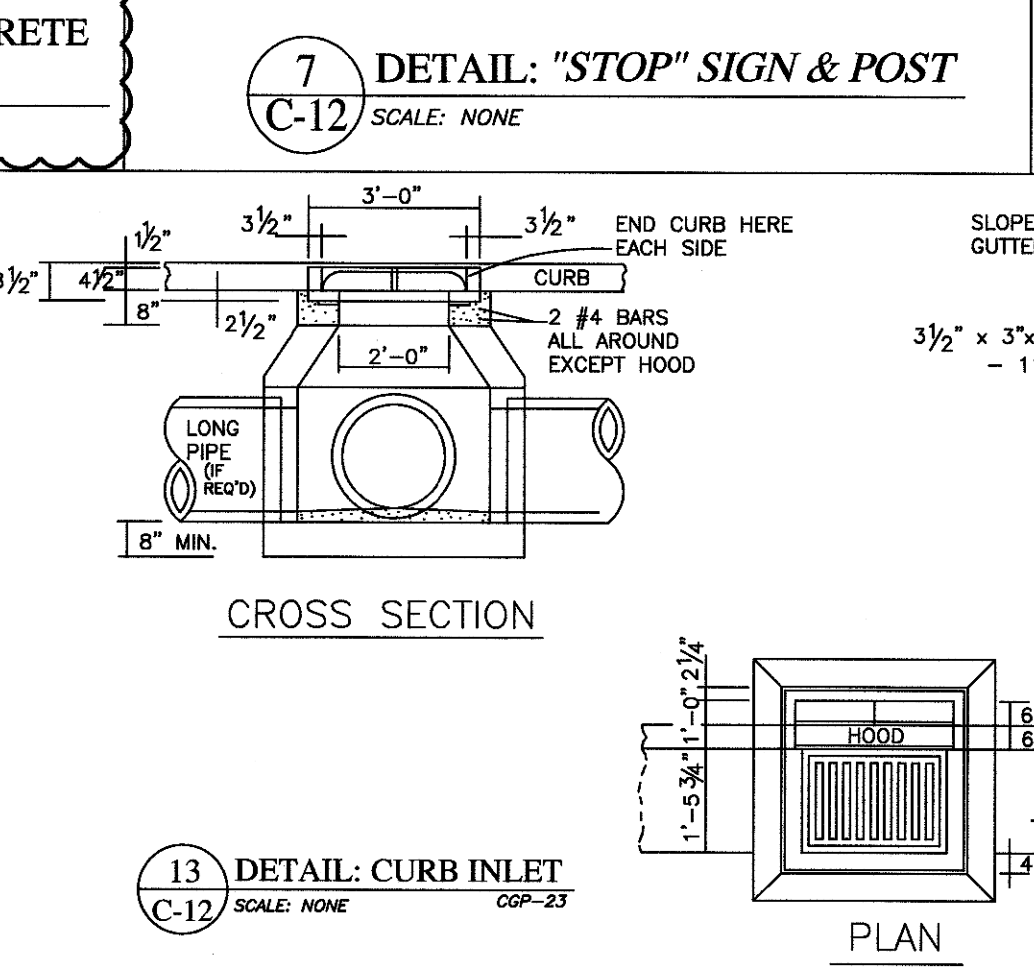
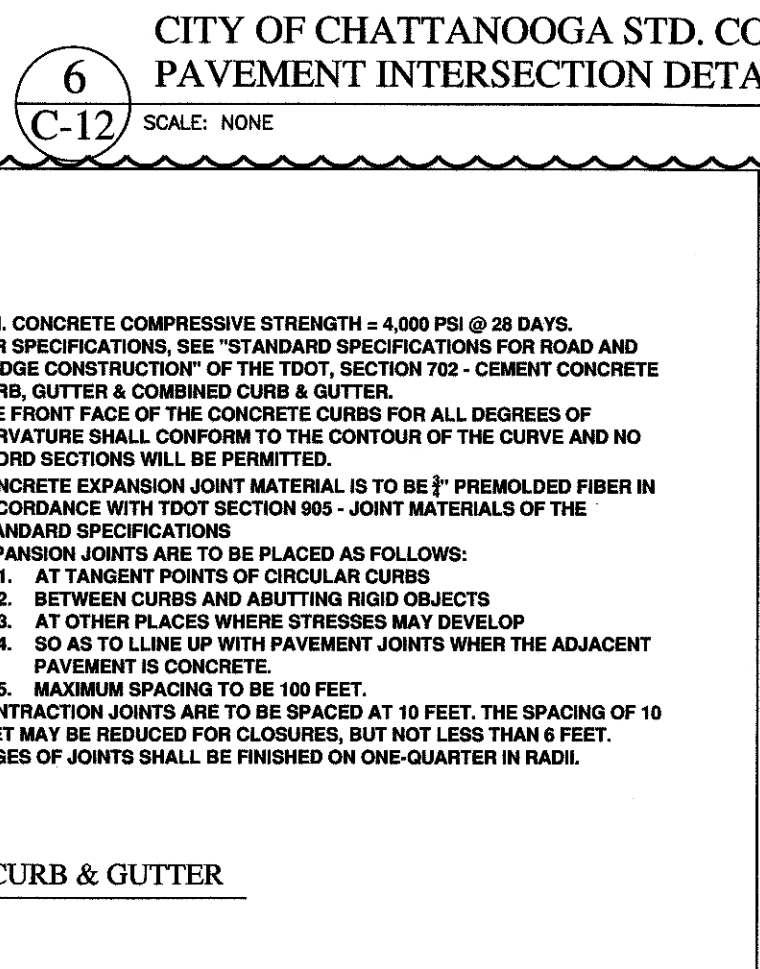
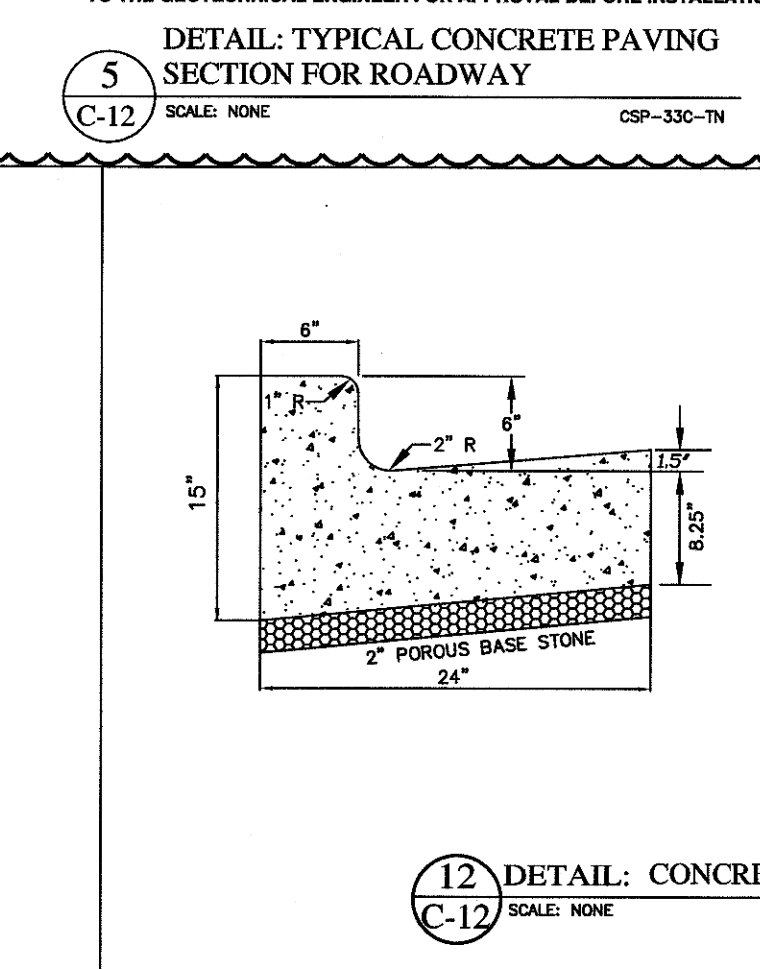
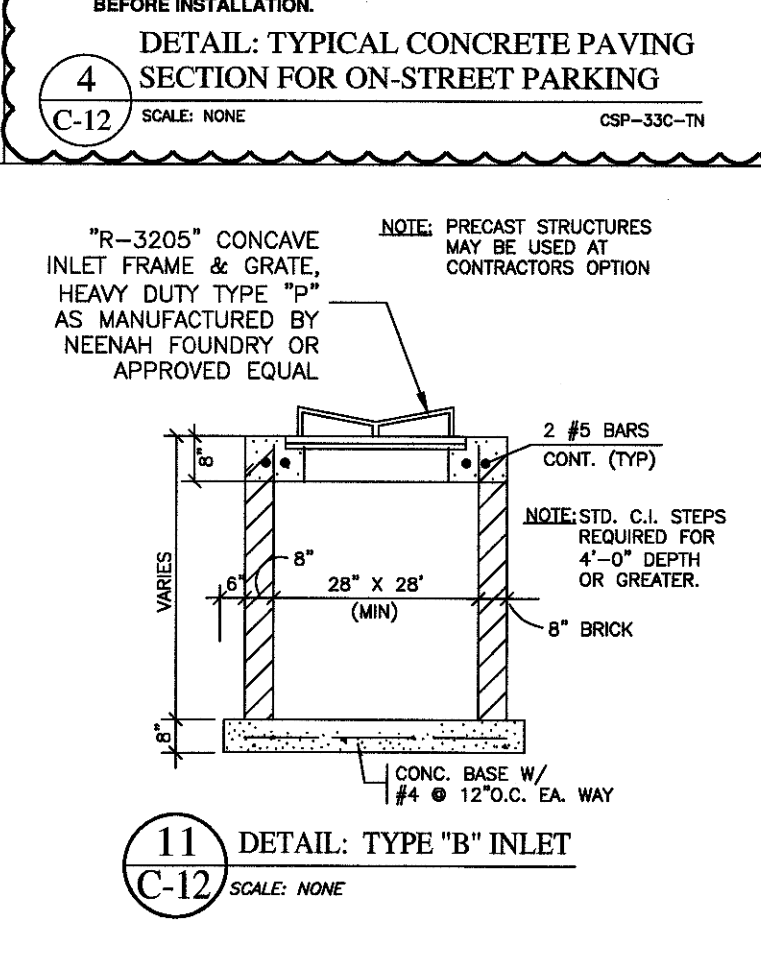
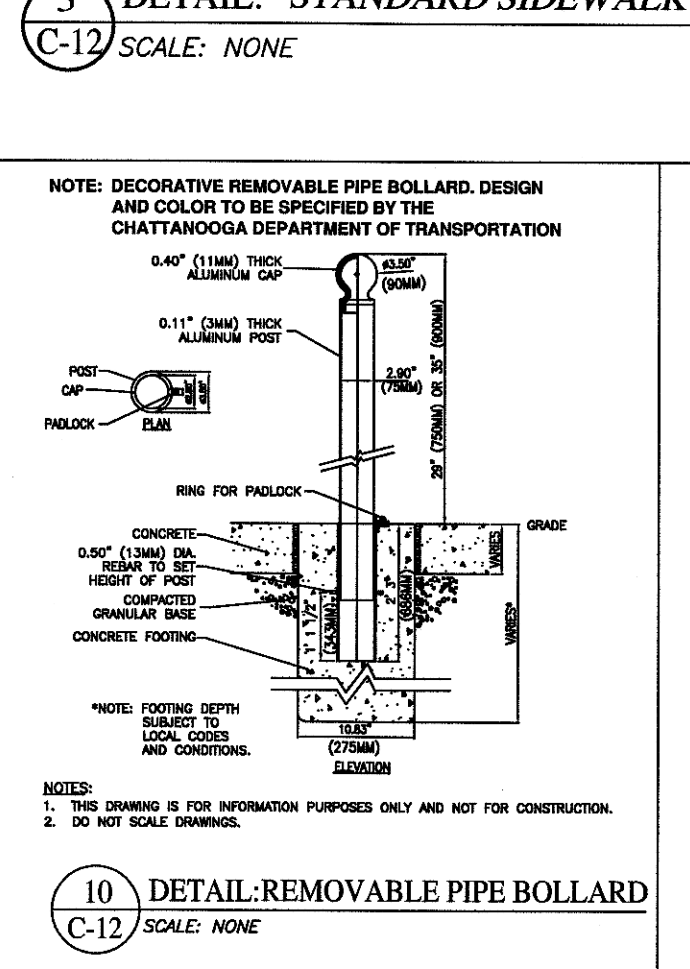
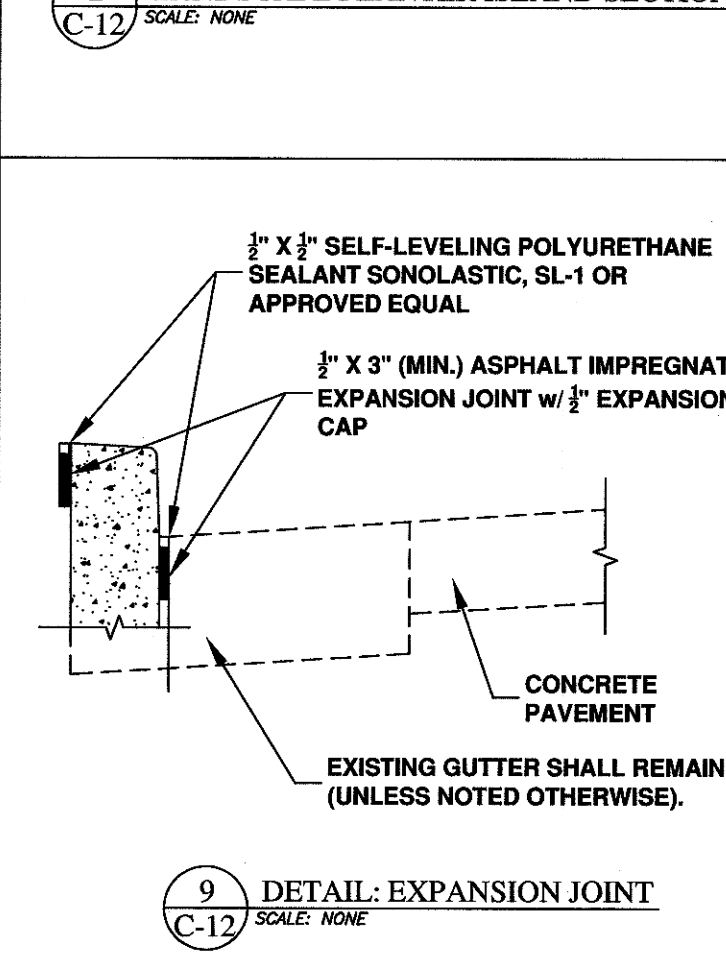
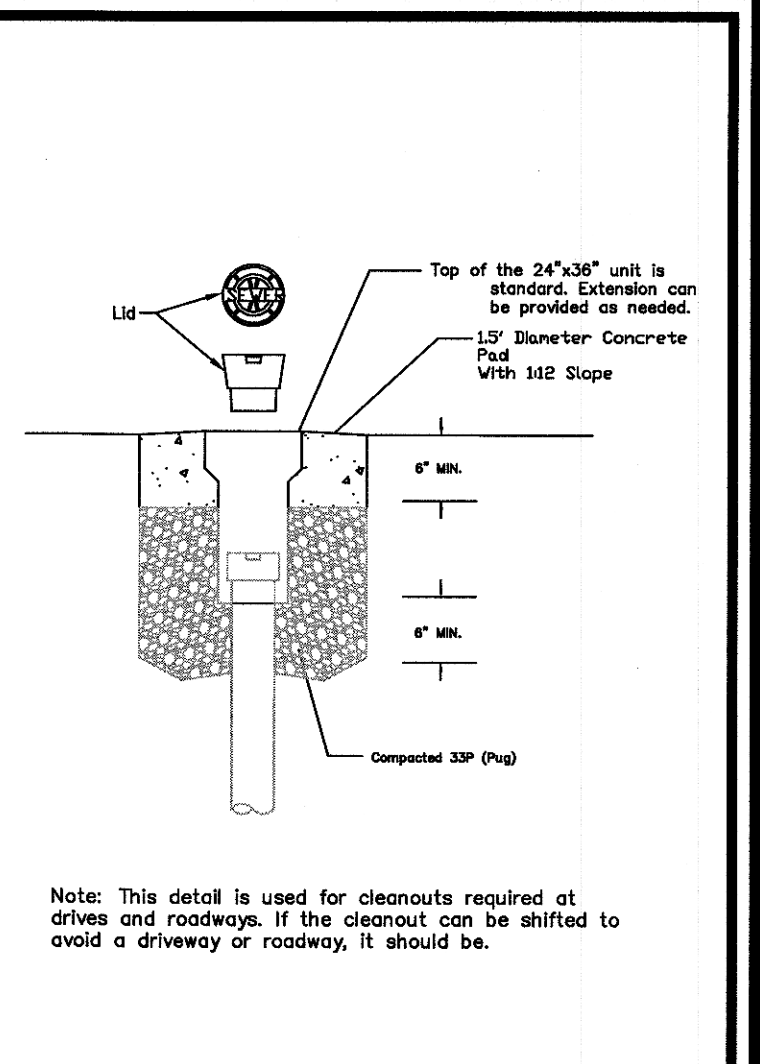
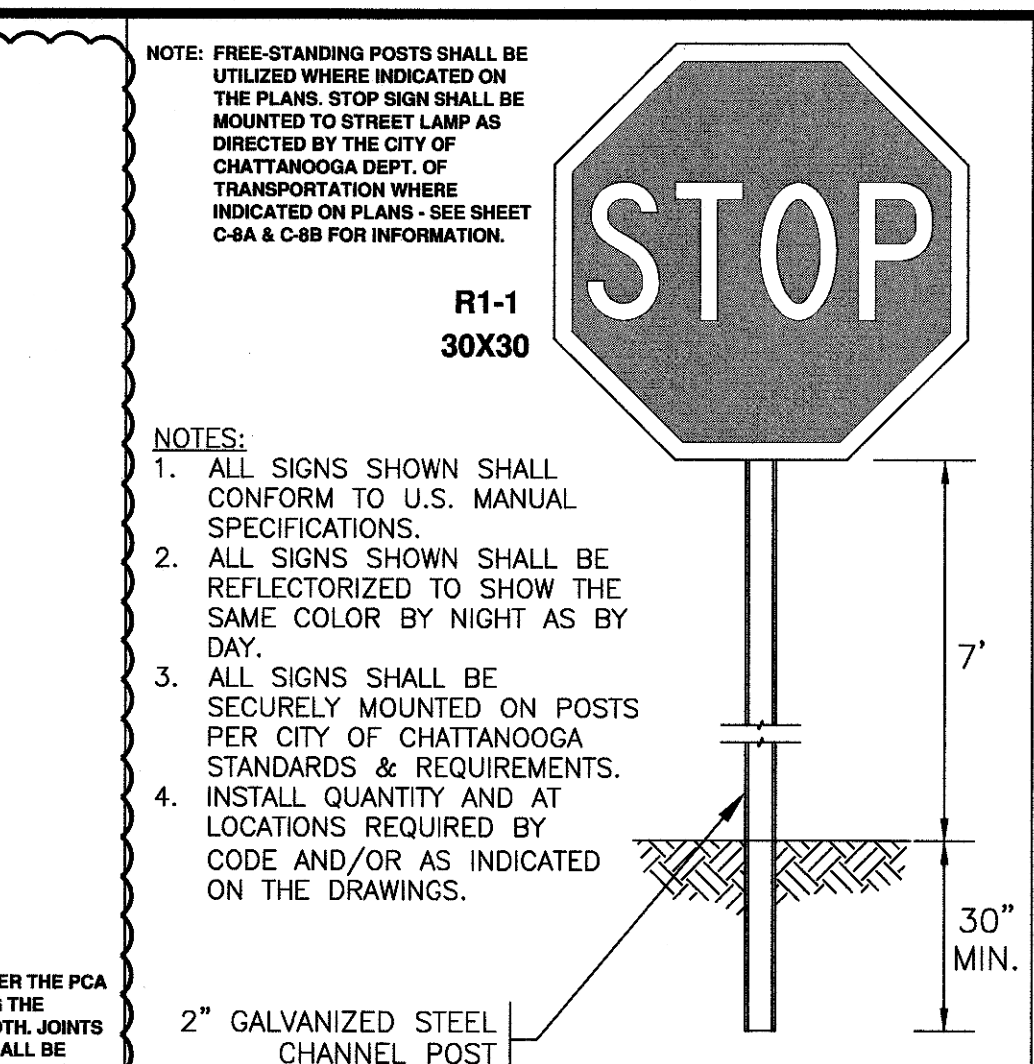
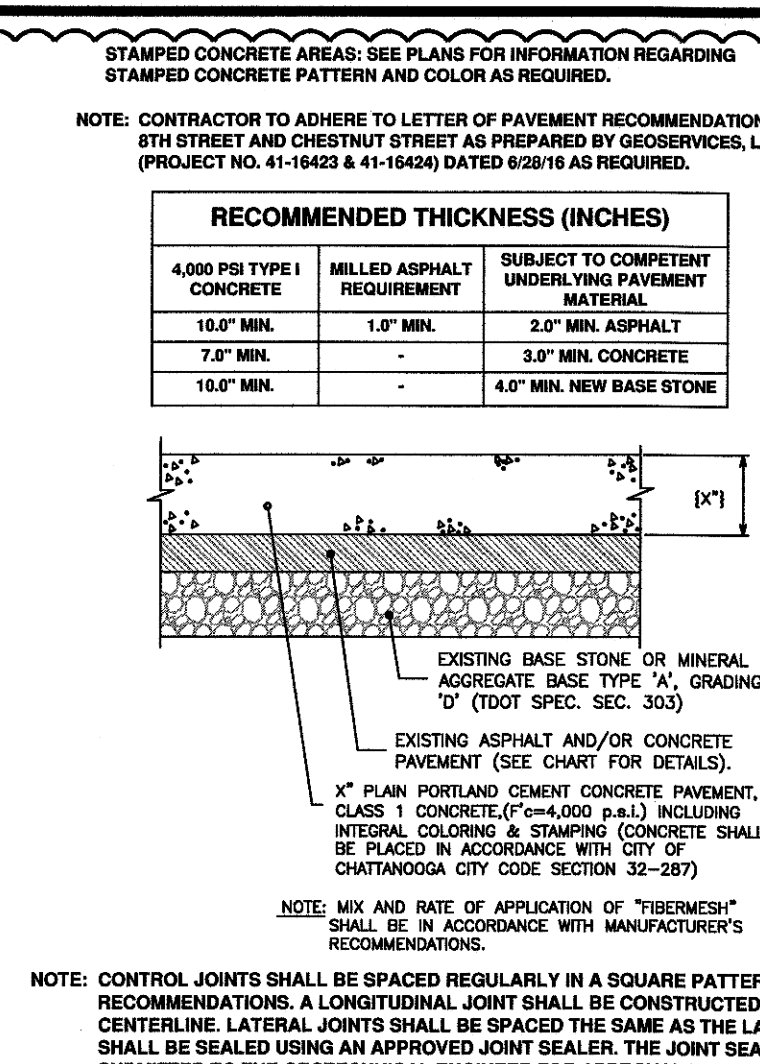
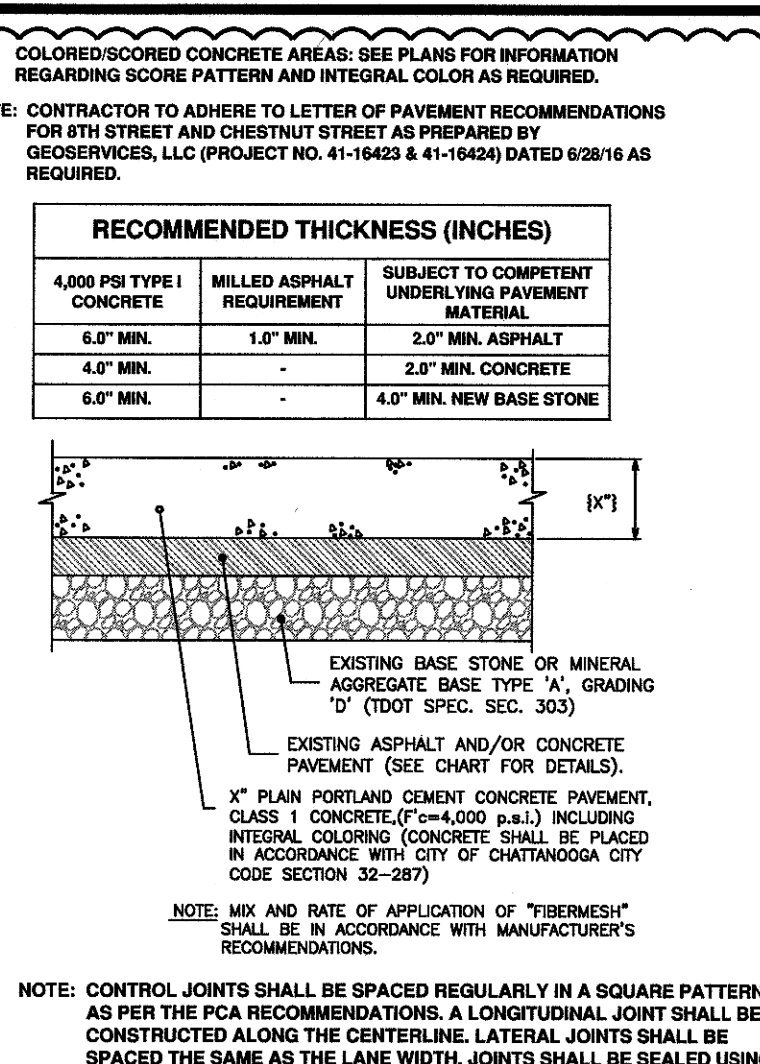
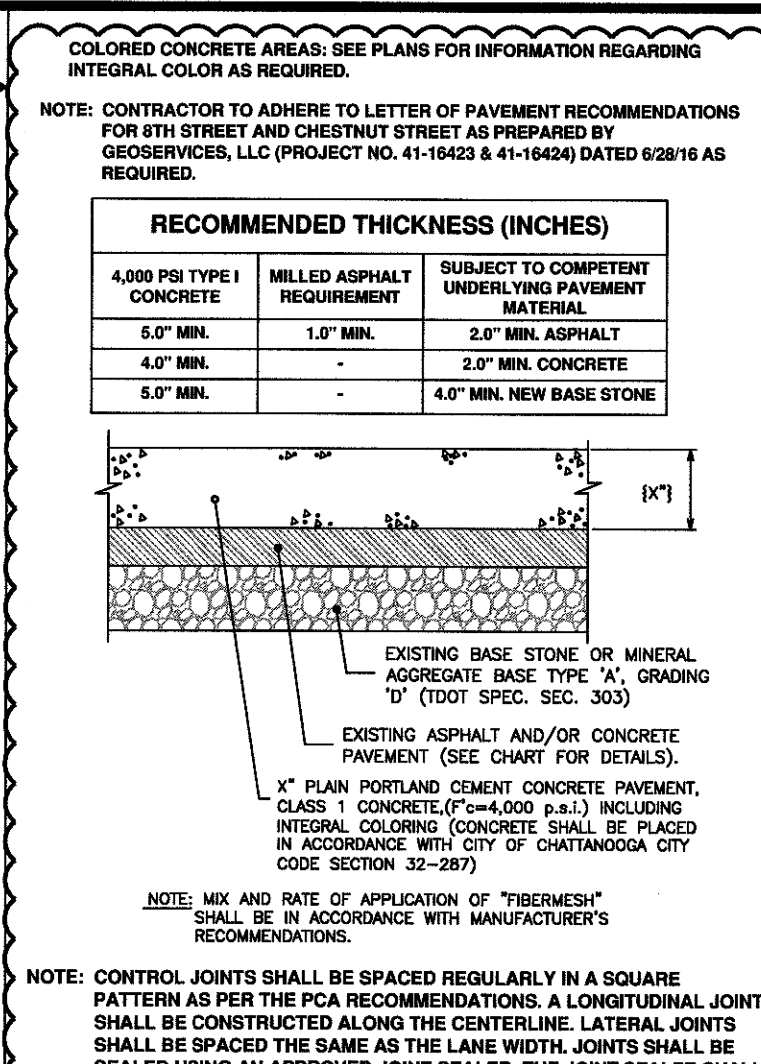
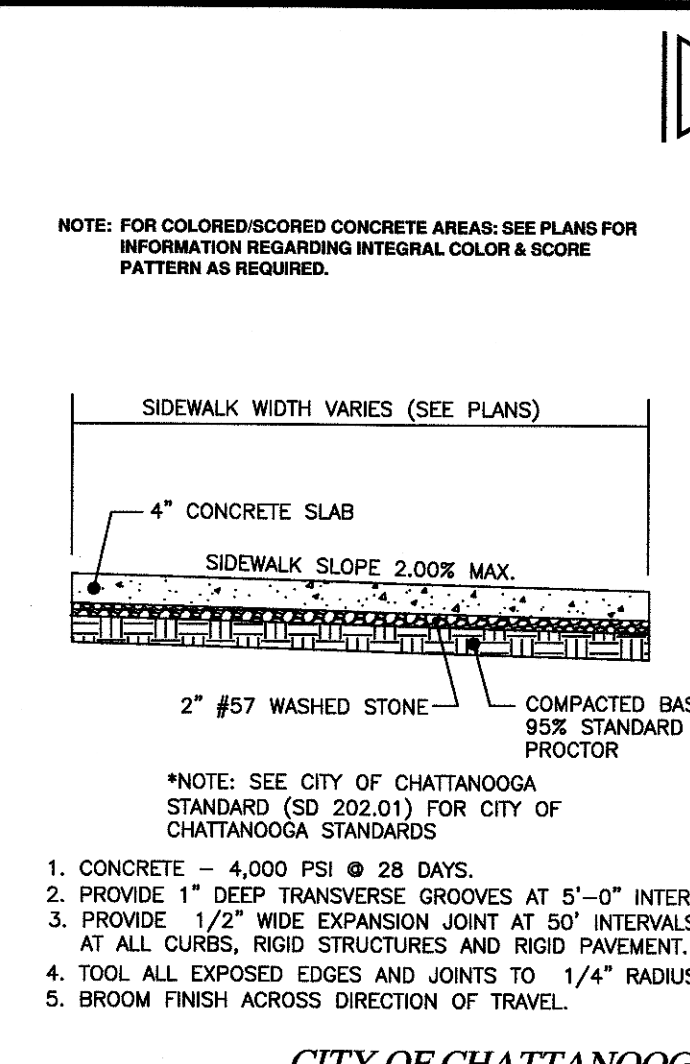
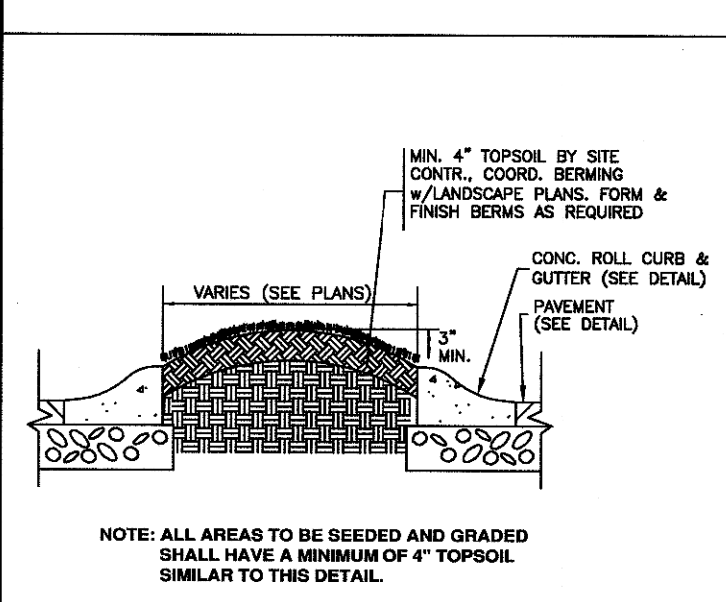
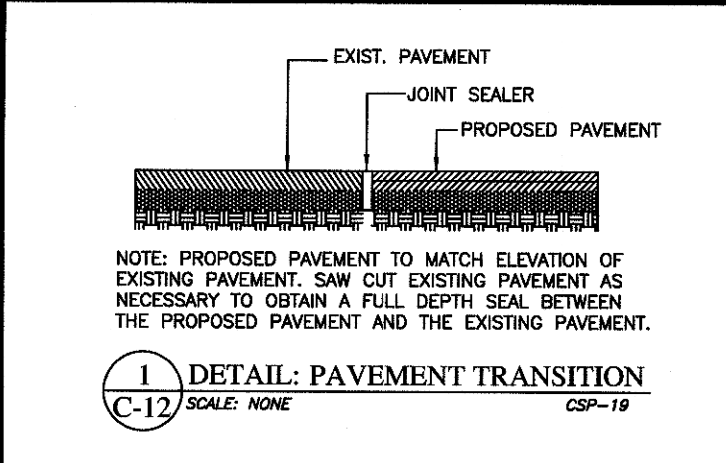
REVISIONS	
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FILE: 15170_DRAWINGSET_8TH & PINE.DWG

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DATE: 01/13/17
DRAWN BY: DAB
CHECKED BY: MAP
PROJ. NUMBER: 15-170
SHEET NUMBER: **C-11**

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MAP ENGINEERS L.L.C.

8TH STREET & PINE STREET
ROAD IMPROVEMENT PROJECT

FOR:
CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION

SITE DETAILS

REVISIONS

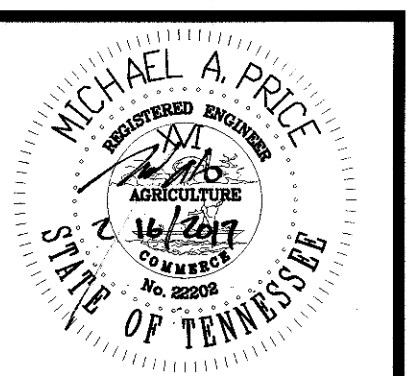
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2	MISC. REVISIONS	02/16/17
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DATE: 01/13/17
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CHECKED BY: MAP
PROJ. NUMBER: 15-170
SHEET NUMBER: **C-12**



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**MAP ENGINEERS
L.L.C.**

**8TH STREET & PINE STREET
ROAD IMPROVEMENT PROJECT**
FOR:
**CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION**



**SITE
DETAILS**

REVISIONS	
1	CITY COMMENTS 02/14/17
2	MISC. REVISIONS 02/16/17
3	
4	
5	

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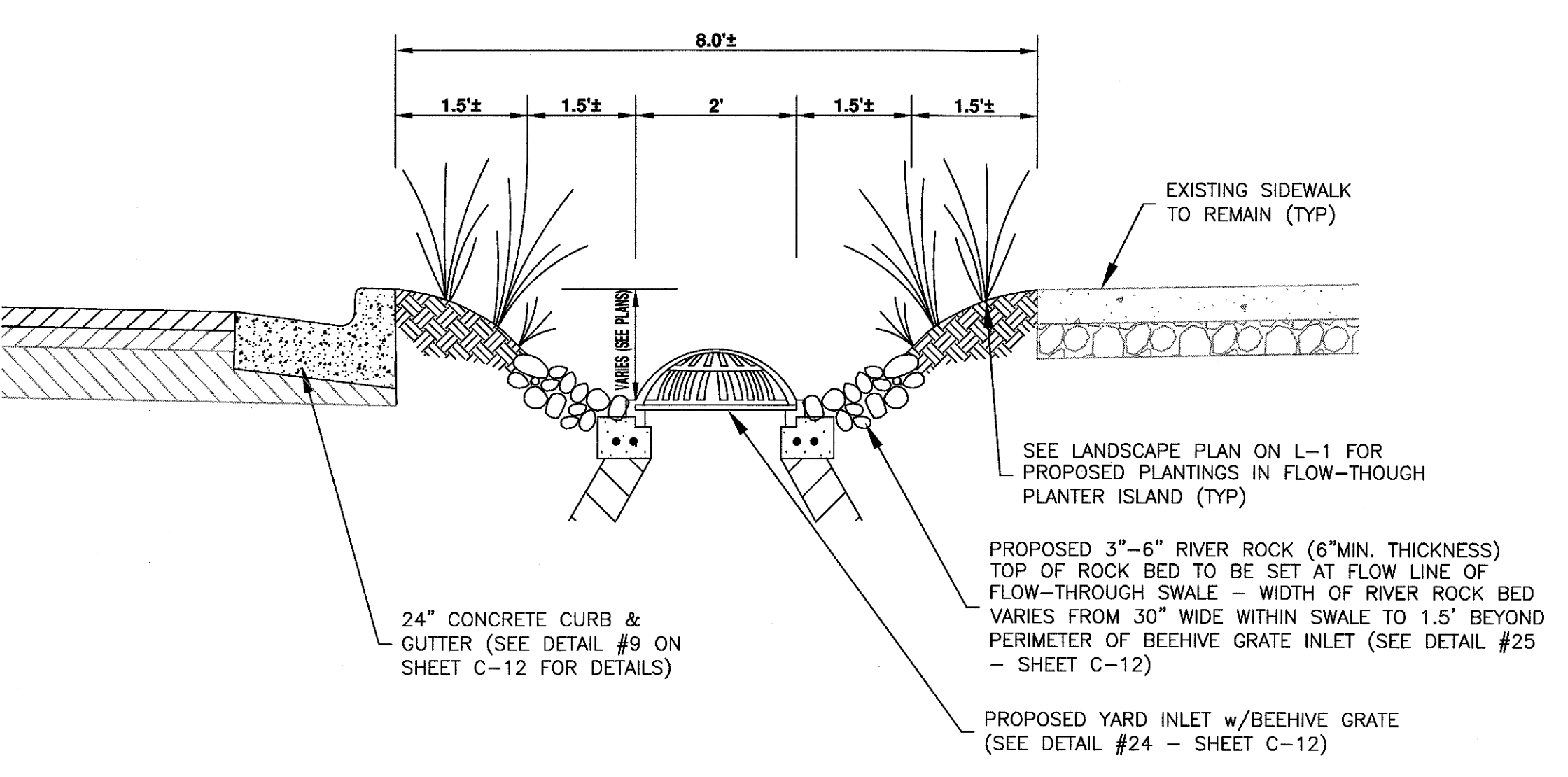
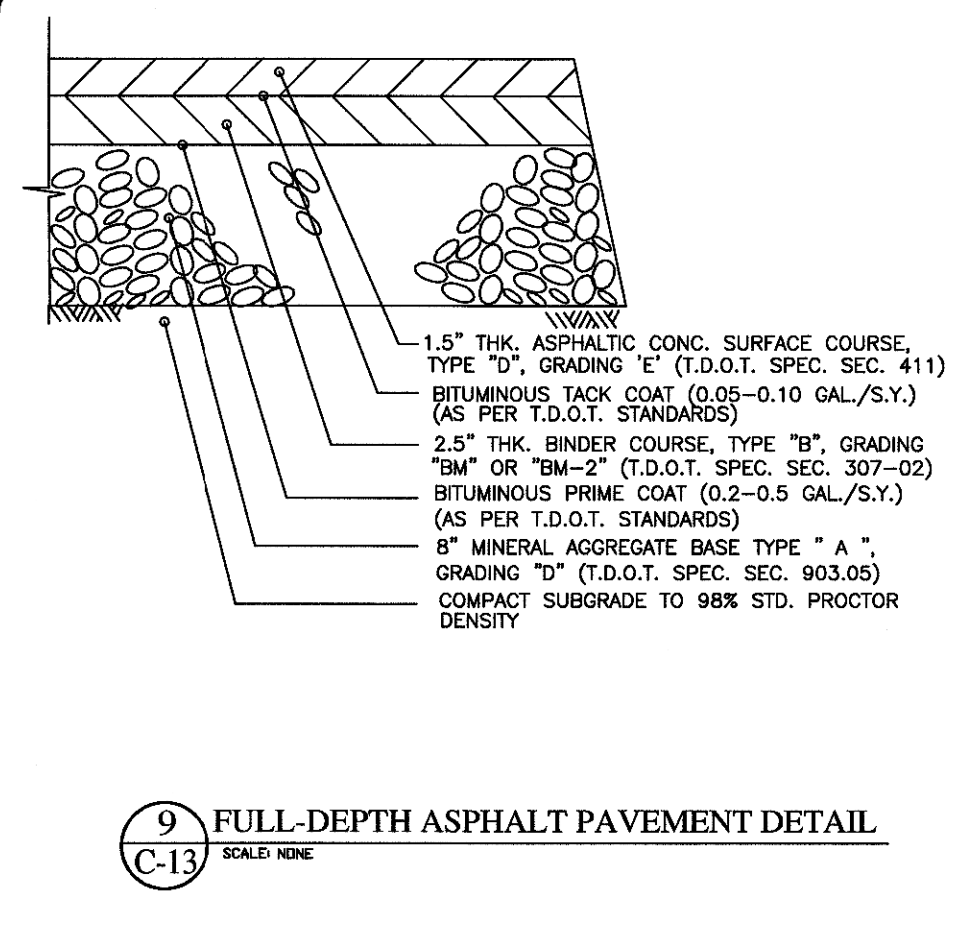
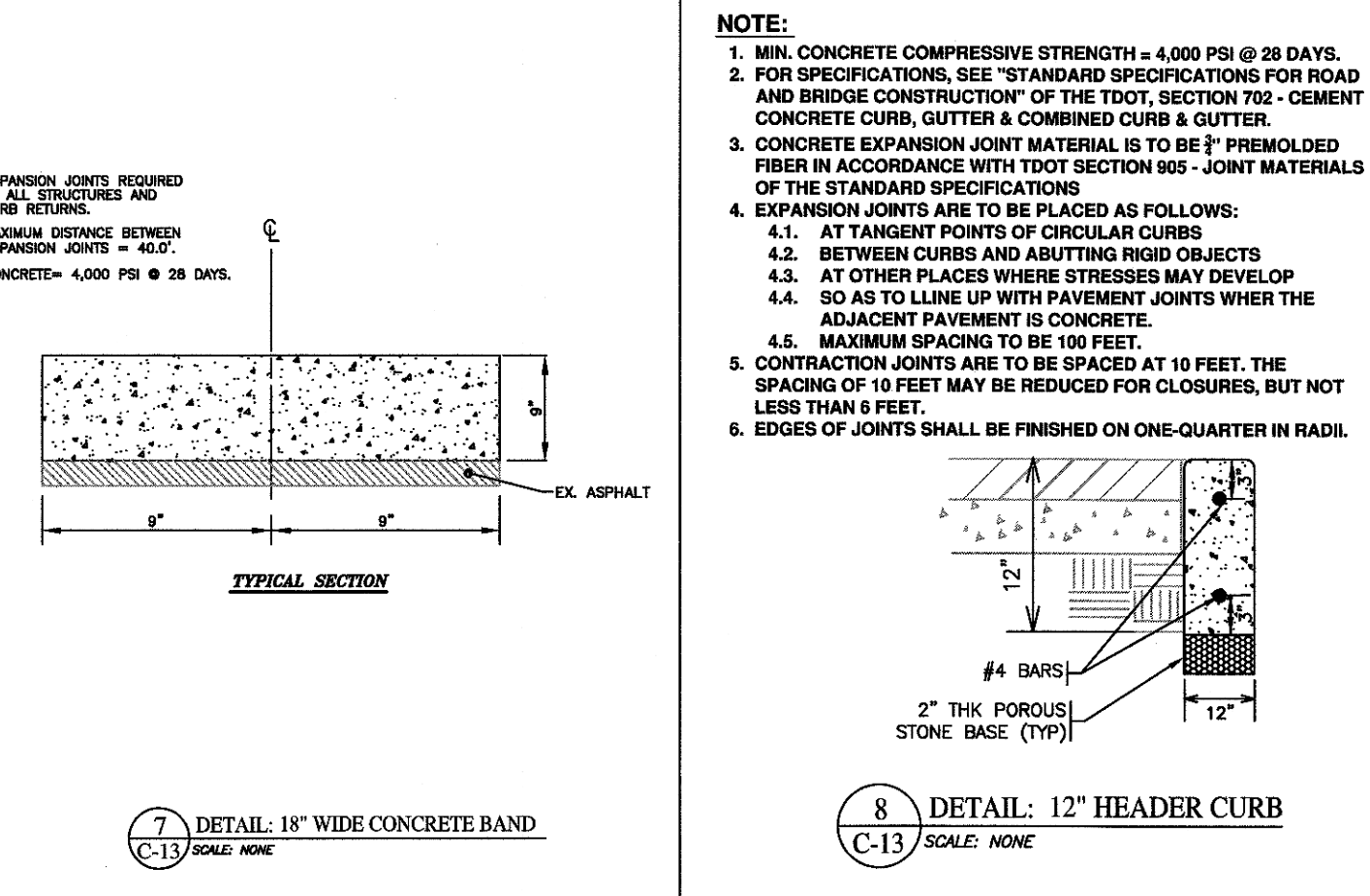
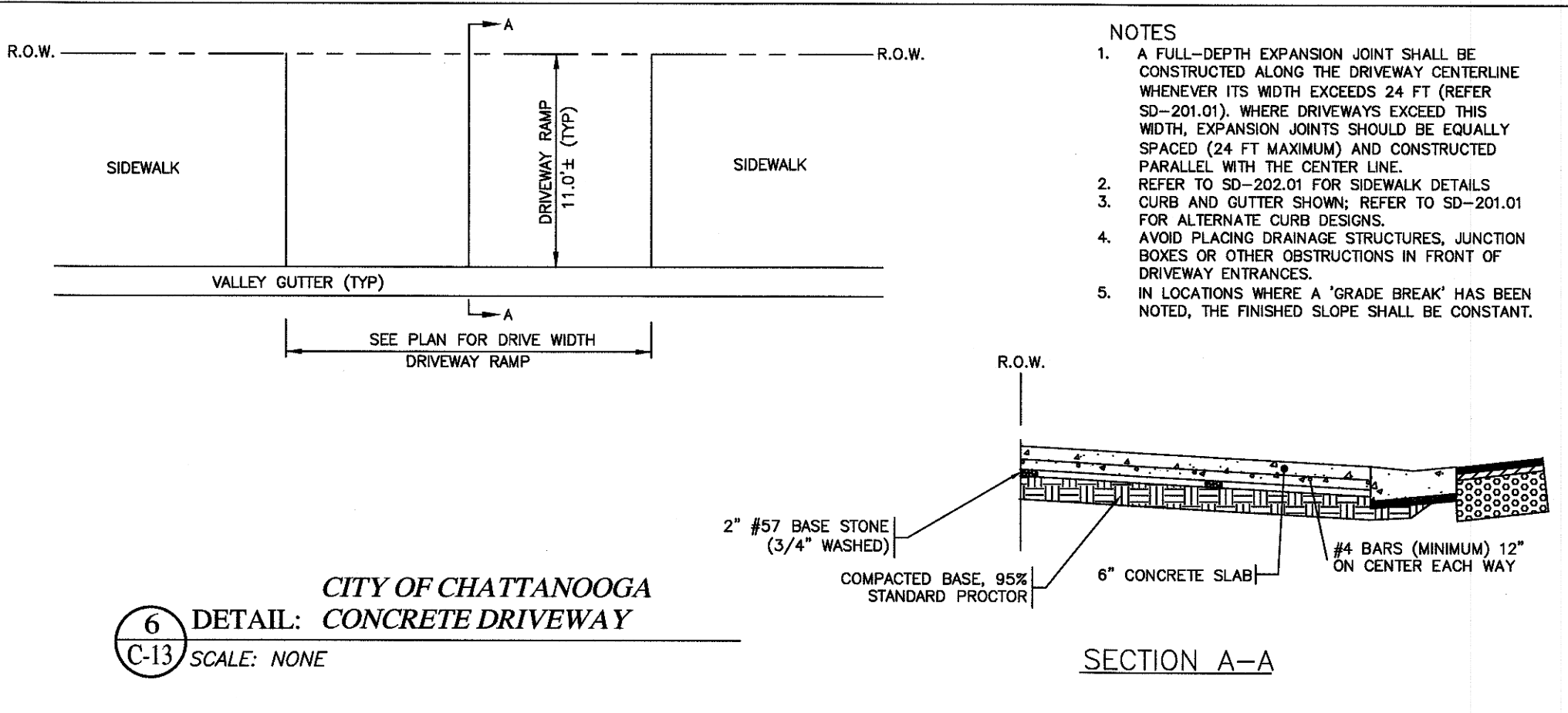
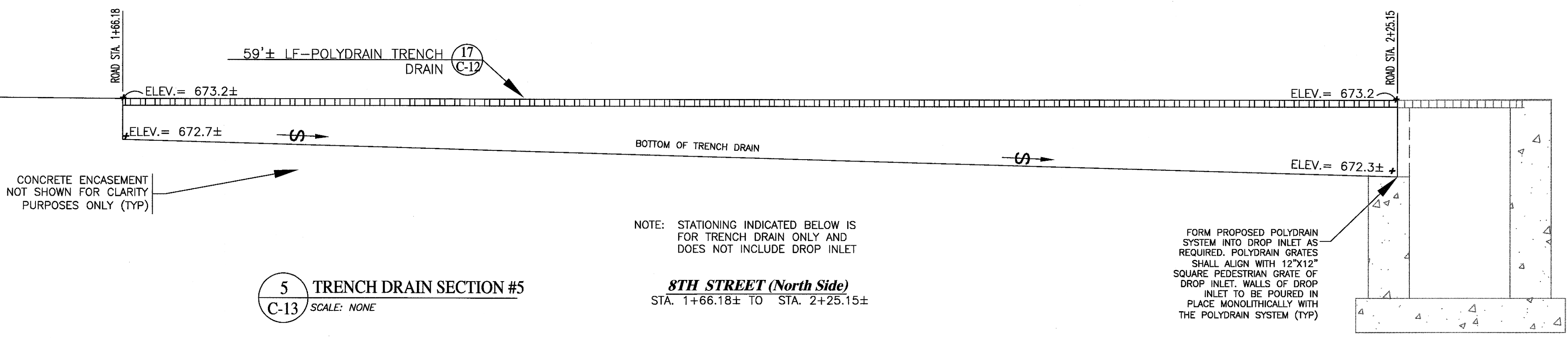
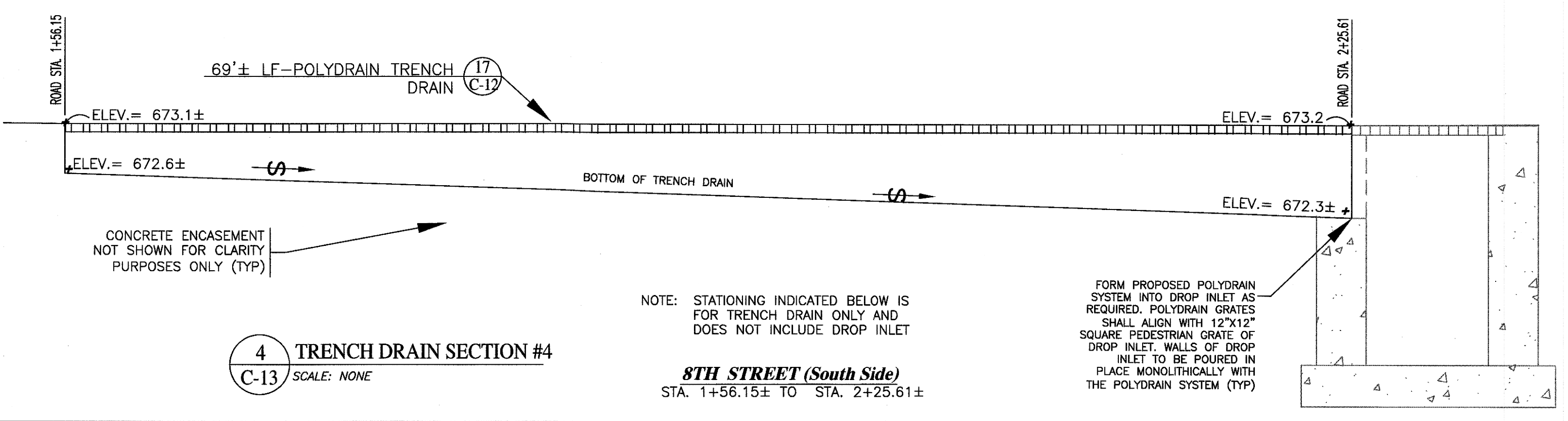
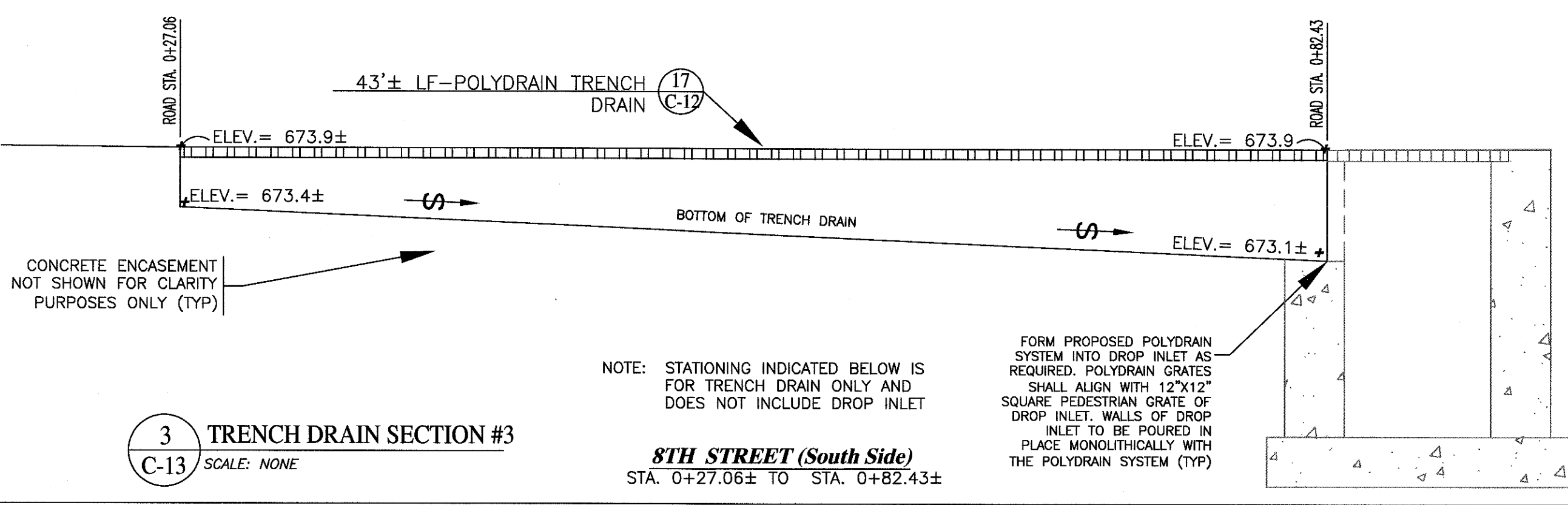
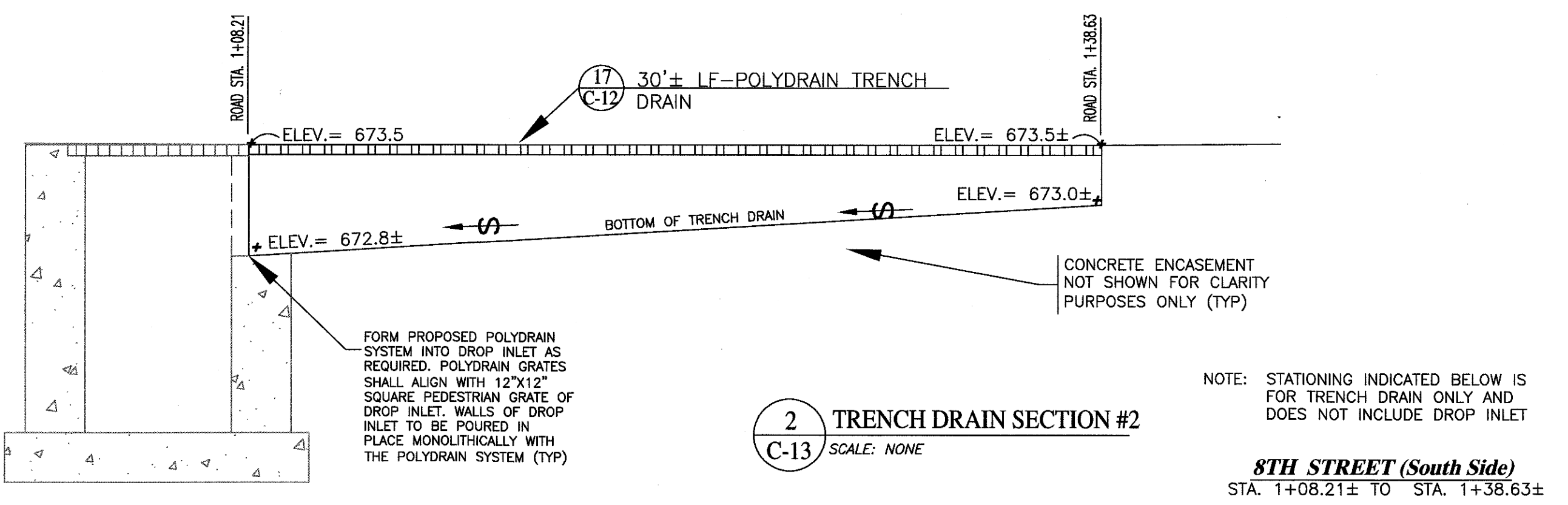
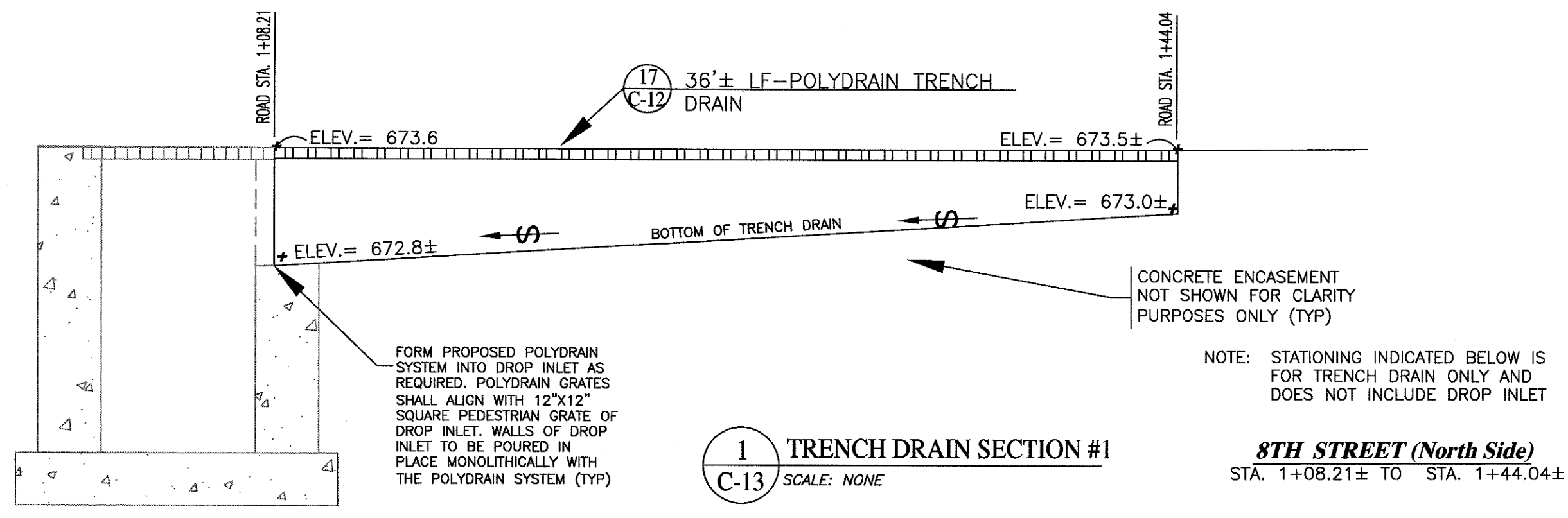
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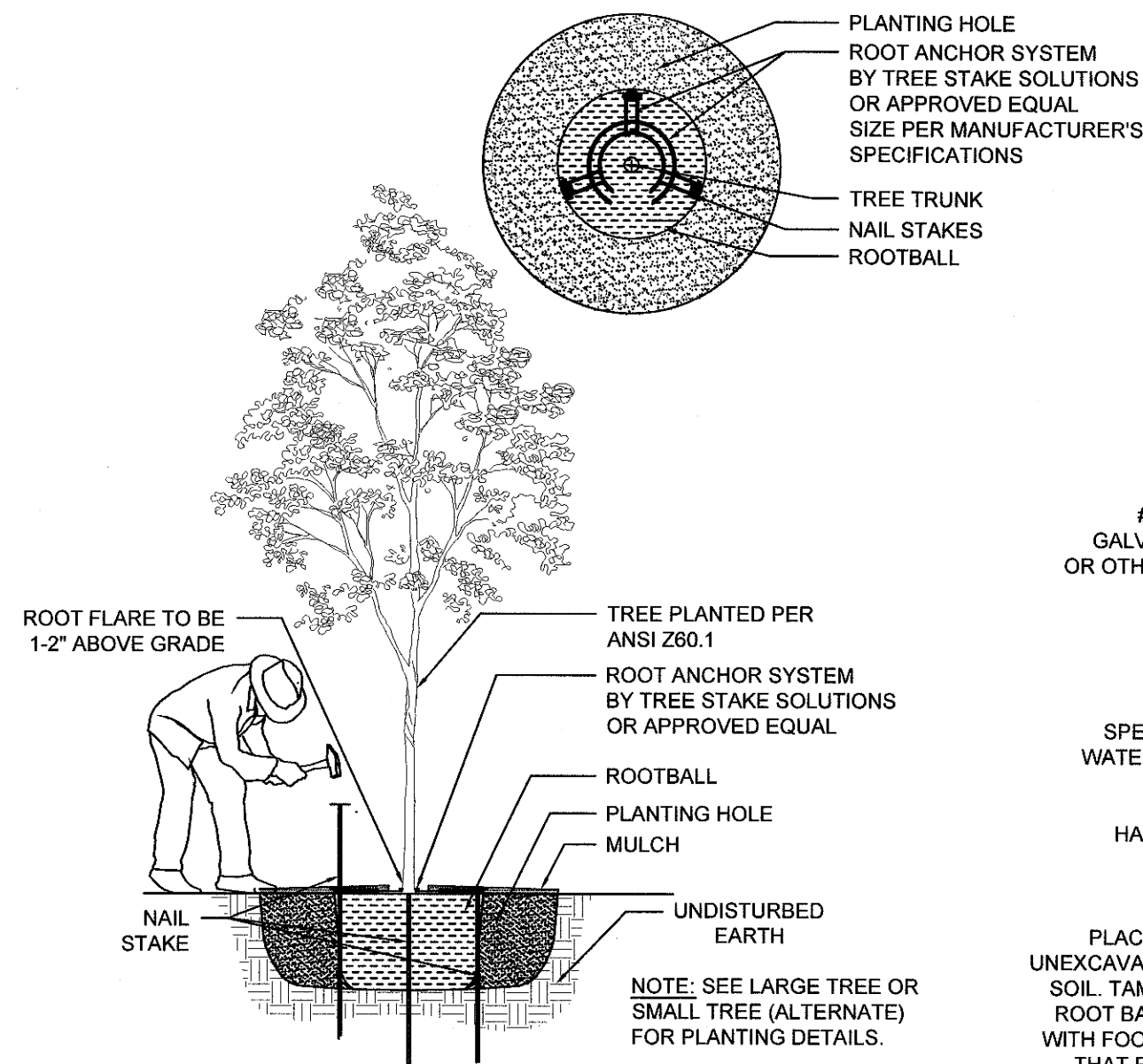
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SHEET NUMBER: **C-13**



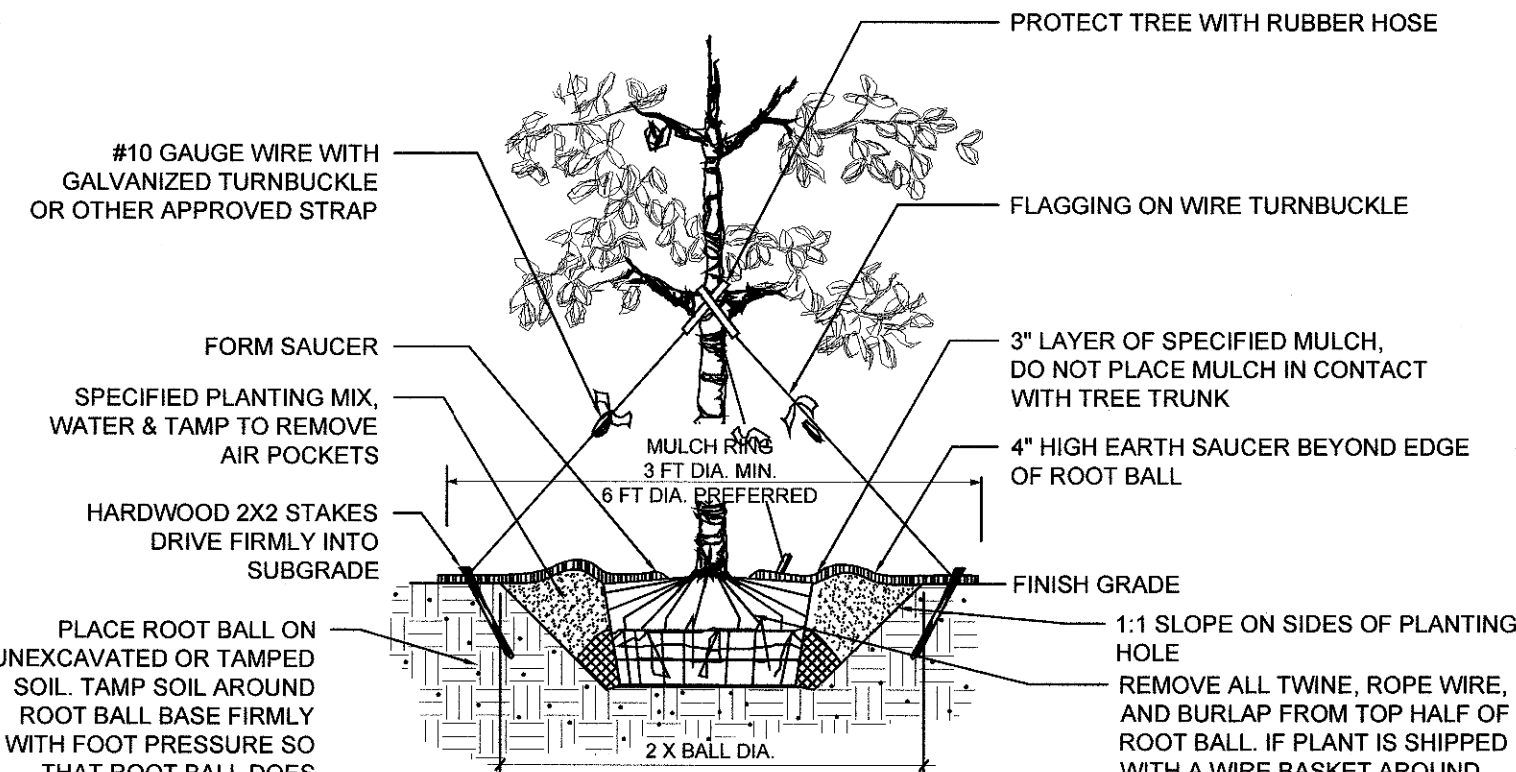
FLOW-THROUGH PLANTER SECTION
N.T.S.



TREE STAKING (PRIMARY)

SCALE: NTS

- NOTES:**
- STAKE ONLY IN AREAS OF HIGH WIND OR AS REQUIRED.
 - STAKING OPTIONAL OR BY CITY ORDINANCE.
 - STAKE ABOVE FIRST BRANCHES OR AS NECESSARY FOR FIRM SUPPORT.
 - WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES.
 - EACH TREE MUST BE PLANTED SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
 - BACK FILL WITH TOPSOIL IN SANDY LOAM SOILS, ADD 20% MAXIMUM BY VOLUME COMPOSTED ORGANIC MATERIAL TO THE EXISTING SOIL.
 - SET TOP OF ROOT FLARE 1-2" ABOVE GRADE.
 - DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
 - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.



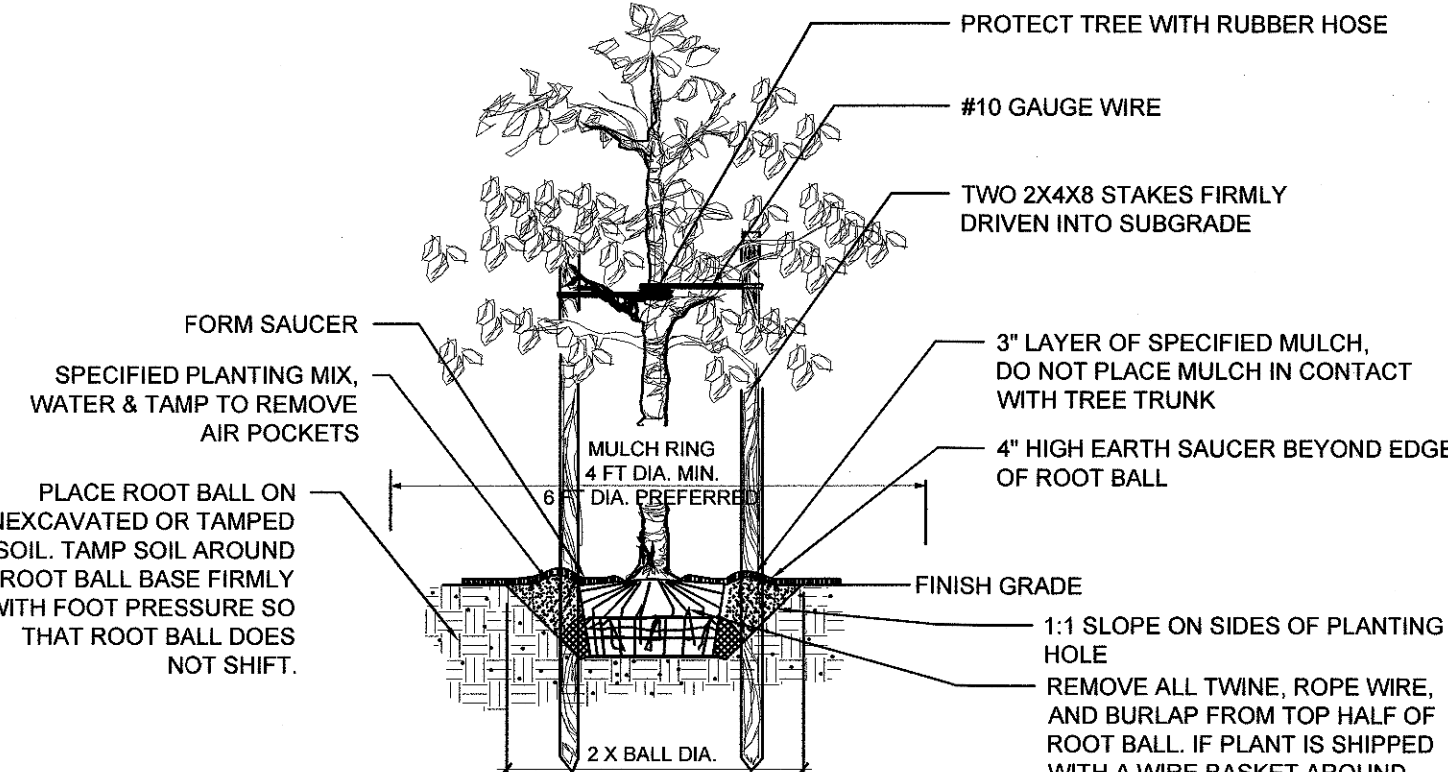
LARGE TREE (ALTERNATE)

SCALE: NTS

- STAKING:**
- STAKE ONLY IN AREAS OF HIGH WIND OR AS REQUIRED.
 - STAKING OPTIONAL OR BY CITY ORDINANCE.
 - ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL.
 - ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF 12 MM (0.5").
 - REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

TREES NORMALLY DO NOT NEED TO BE STAKED, AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF. THE FOLLOWING ARE REASONS WHY TREES DO NOT REMAIN STRAIGHT:

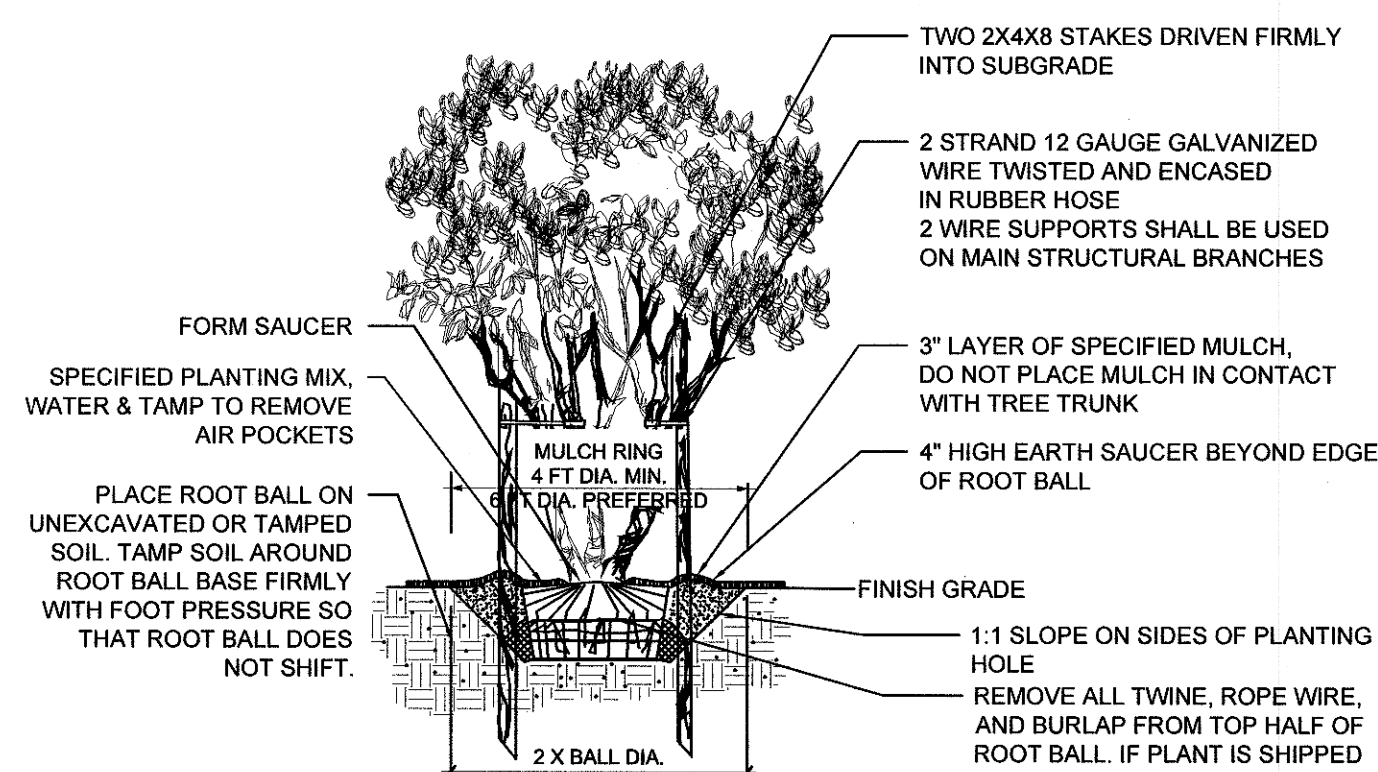
- TREES WITH POOR-QUALITY ROOT BALLS OR ROOT BALLS THAT HAVE BEEN CRACKED OR



SMALL TREE (ALTERNATE)

SCALE: NTS

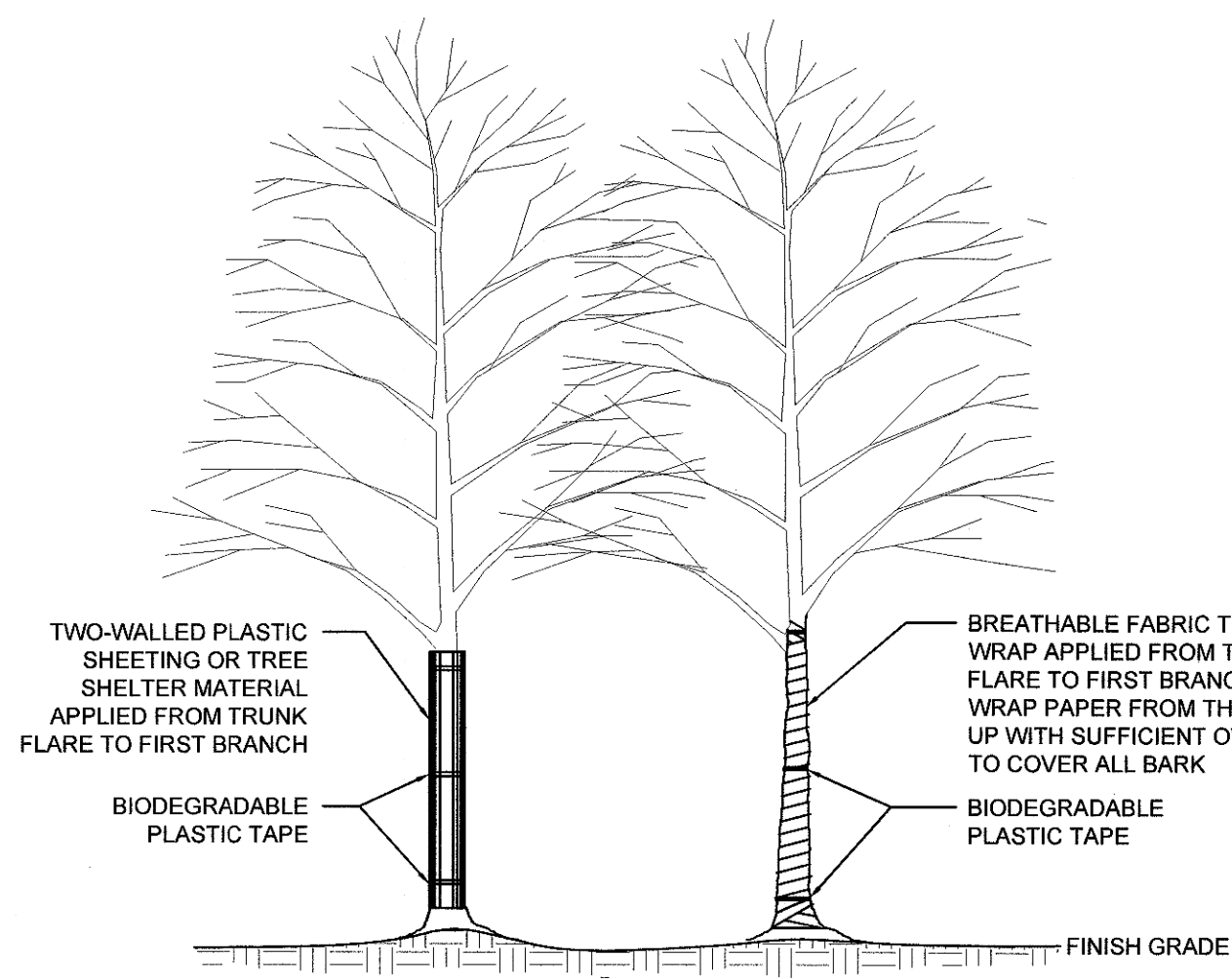
- DAMAGED, REJECT RATHER THAN STAKE.**
- THE TREES THAT HAVE GROWN TOO CLOSE TOGETHER IN THE NURSERY, RESULTING IN WEAK TRUNKS. REJECT RATHER THAN STAKE.
 - PLANTING PROCEDURES THAT DO NOT ADEQUATELY TAMP SOILS AROUND THE ROOT BALL.
 - CORRECT THE PLANTING PROCEDURE.
 - ROOT BALLS PLACED ON SOFT SOIL. TAMP SOILS UNDER ROOT BALL PRIOR TO PLANTING.
 - ROOT BALLS WITH VERY SANDY SOIL OR VERY WET CLAY SOIL. STAKING ADVISABLE.
 - TREES LOCATED IN A PLACE OF EXTREMELY WINDY CONDITIONS. STAKING ADVISABLE.



MULTI-TRUNK TREE

SCALE: NTS

TREE PLANTING / STAKING DETAILS

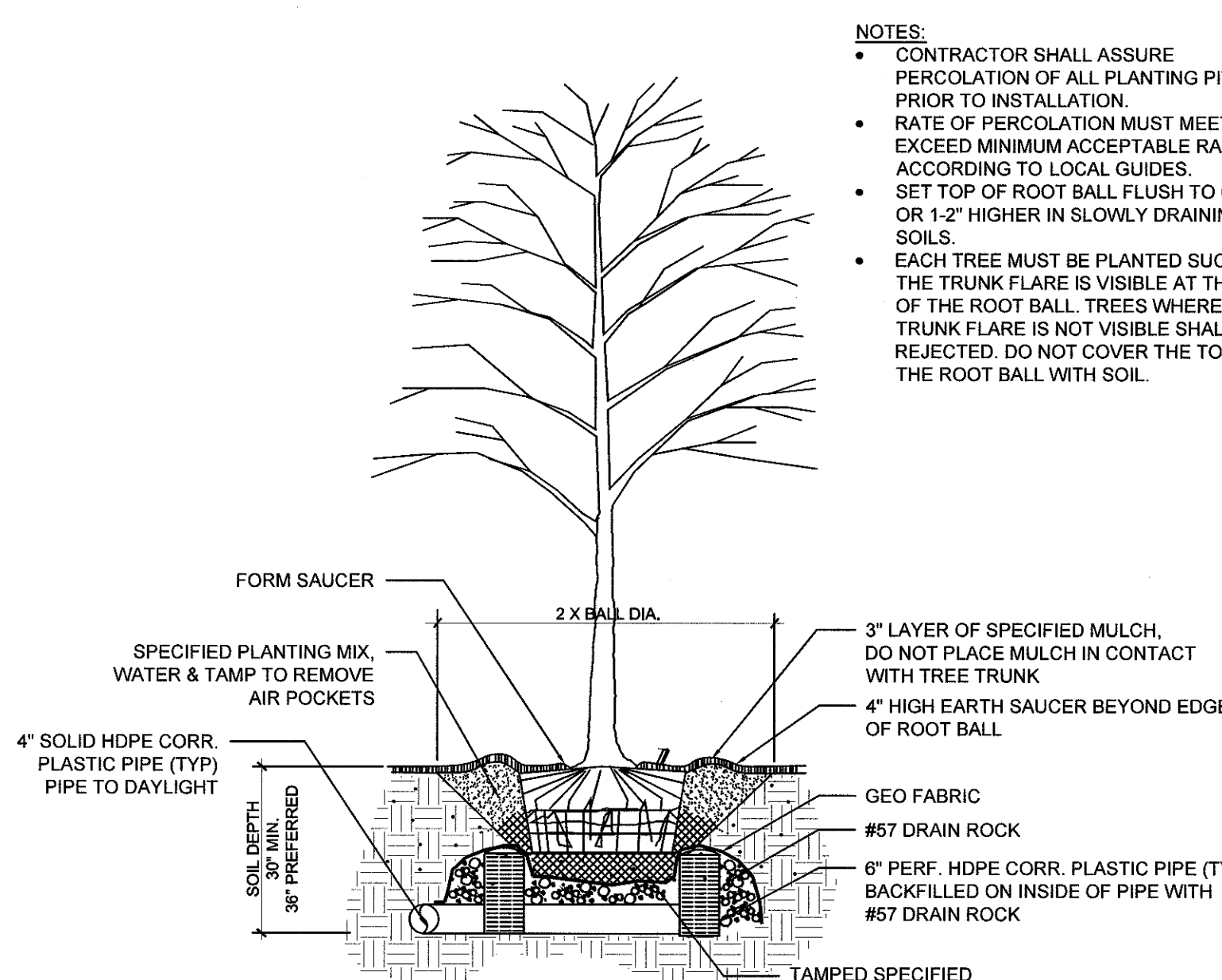


OPTION 1 OPTION 2

- NOTES:**
- APPLY THE PLASTIC SHEETING LOOSELY AROUND THE TRUNK TO LEAVE A 12 MM (0.5") GAP BETWEEN THE TRUNK AND THE SHEETING.
 - TREE WRAP SHOULD BE INSTALLED AT TIME OF PLANTING AND BE REMOVED WHEN DIRECTED BY THE LANDSCAPE ARCHITECT, BUT NO LATER THAN 12 MONTHS AFTER PLANTING.
 - TREES WHOSE NORTH ORIENTATION IS NOT CHANGED FROM THE NURSERY DO NOT NEED TO BE WRAPPED EXCEPT TREES WITH VERY THIN BARK, SUCH AS RED MAPLE.

TREE WRAPPING DETAIL

SCALE: NTS



POORLY DRAINED TREE PIT PLANTING DETAIL

SCALE: NTS

- NOTES:**
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
 - RATE OF PERCOLATION MUST MEET OR EXCEED MINIMUM ACCEPTABLE RATE ACCORDING TO LOCAL GUIDES.
 - SET TOP OF ROOT BALL FLUSH TO GRADE OR 1-2" HIGHER IN SLOWLY DRAINING SOILS.
 - EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES AND TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE.
2. FINAL GRADING SHALL BE EXECUTED IN SUCH A MANNER TO PROVIDE POSITIVE DRAINAGE.
3. PROTECT EXISTING TREES ON SITE BY INSTALLATION OF A PROTECTION FENCE AT THE DRAIN LINE OF TREES OR AS REQUIRED BY MUNICIPALITY BMP.
4. TREES SHALL REMAIN UNLESS SPECIFIED FOR REMOVAL. DO NOT PLACE SOIL OR DEBRIS WITHIN THE DRAIN LINE OF THE TREE. TREES TO REMAIN ARE TO BE PROTECTED FROM DISTURBANCE IN THE CRITICAL ROOT ZONE (CRZ).
5. BERM ALL BEDS WITH A MINIMUM OF 4" OF TOPSOIL. UNLESS OTHERWISE NOTED, USING SUITABLE TOPSOIL. SUITABLE TOPSOIL IS CONSIDERED COMPOST SOIL THAT IS A MIXTURE OF SAND, SILT, AND CLAY WITH A MINIMUM OF 1.5% DRY WEIGHT ORGANIC MATTER AND A CLAY CONTENT BETWEEN 15-25%.
A. TOPSOIL MUST BE TESTED FOR TEXTURE, DRAINAGE CAPABILITY, NUTRIENT VALUES, AND PH PRIOR TO INSTALLATION.
B. TOPSOIL SHALL BE FREE FROM SUBSOL, VEGETATION, WEEDS OR ANY EXTRANEOUS OR DELETERIOUS MATERIALS LARGER THAN 1". REMOVE ANY UNSUITABLE AND EXCESS TOPSOIL FROM THE SITE.
6. WHEN PLANTING TREES USE A LANDSCAPE MIX WITH 3 PARTS FRABLE NATIVE TOPSOIL, 2 PARTS AGED GROUND BARK HUMUS, AND 1 PART COURSE TO MEDIUM SAND.
7. CONTRACTOR TO VERIFY ALL MATERIAL QUANTITIES. IN THE EVENT OF ANY DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
8. PLANT TREES WITH ROOT FLARE 1-2" ABOVE GRADE. ALL PLANTINGS SHALL CONFORM TO ANSI Z60.1 LATEST EDITION.
9. ALL TREES SHALL HAVE A 3" DIAMETER MULCH RING COVERED WITH A THICK LAYER OF HARDWOOD MULCH. UNLESS OTHERWISE SPECIFIED, BARK MULCH SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND SHALL BE UNIFORM IN TEXTURE AND COLOR. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED. ALL PLANTING BEDS SHALL HAVE A PRE-EMERGENT APPLIED AS PER MANUFACTURER'S RECOMMENDATION. ROOT FLARE OF TREE SHALL BE VISIBLE.
10. ALL PLANTING BEDS SHALL HAVE A THICK LAYER OF HARDWOOD MULCH UNLESS OTHERWISE SPECIFIED. BARK MULCH SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND SHALL BE UNIFORM IN TEXTURE AND COLOR. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED. ALL PLANTING BEDS SHALL HAVE A PRE-EMERGENT APPLIED AS PER MANUFACTURER'S RECOMMENDATION.
11. ALL TREES TO HAVE SCOTTS AGRIFORM 20-10-5 FERTILIZER TABLETS OR APPROVED EQUAL FOR 2 YEAR ROOT ZONE FEEDING. APPLICATION AND INSTALLATION PER MANUFACTURER'S SPECIFICATIONS.
12. PLANTS AND ALL OTHER MATERIALS STORED ON SITE WILL BE PLACED WHERE THEY DO NOT CONFLICT WITH CONSTRUCTION. LOCATE MATERIALS AS DIRECTED BY OWNER AND/OR GENERAL CONTRACTOR.
13. SODDED/LAWN AREAS ARE TO BE GRADED UNIFORMITY WITHOUT ANY UNDULATIONS OR IRREGULARITIES IN THE SURFACE PRIOR TO ANY SOD/SEED INSTALLATION.
14. LAWN FERTILIZER IS TO BE ORGANIC UNIFORM IN COMPOSITION AND FREE FLOWING.
15. GRASS AREAS SHALL BE PLANTED IN SPECIES NORMALLY GROWN AS PERMANENT LAWNS FOR THE SITE LOCATION.
16. ALL DISTURBED AREAS SHALL BE SEEDED, SODDED, OR PLANTED WITH GROUNDCOVERS.
17. CONTRACTOR SHALL MAINTAIN LANDSCAPING UNTIL FINAL APPROVAL. KEEP LAWNS MOWED, ALL PLANTS MAINTAINED DISEASE-FREE, AND PLANTING BEDS GROOMED, EXCEPT IN NATURALLY OCCURRING VEGETATION AREAS.
18. ALL PLANT MATERIAL SHALL EXCEED THE STANDARDS SET FORTH IN AMERICAN STANDARD FOR NURSERY STOCK. ALL PLANTS MUST MEET OR EXCEED MINIMUM SIZE NOTED IN THE MATERIALS SCHEDULE. TREES SHALL BE NO. 1 GRADE SPECIMEN AND SHRUBS SHALL BE HEAVY, WELL-SHAPED SPECIMENS.
19. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND MEETING PLANTING SPECIFICATIONS "SECTION 320300: PLANTS".
20. PLANTING SEASON: PLANTINGS SHALL BE PLANTED DURING OPTIMAL PLANTING SEASON FOR REGION. PLANTING OUTSIDE OF REGION'S OPTIMUM PLANTING SEASON SHALL BE VERIFIED BY LANDSCAPE ARCHITECT. ALL MEASURES OF CARE TO INCLUDE PERMANENT OR TEMPORARY IRRIGATION SHALL BE IN PLACE FOR OUT OF SEASON PLANTINGS.
21. TEMPORARY IRRIGATION MAY BE REQUIRED FOR SUMMER PLANTINGS AS NECESSARY FOR ESTABLISHMENT. CONTRACTOR RESPONSIBLE FOR WATERING ALL PLANTS AS REQUIRED FOR ESTABLISHMENT.
22. CONTRACTOR TO PROVIDE AN ACCURATE PHOTO OF ALL PLANTING MATERIALS TO BE INSTALLED. THE PHOTO SHALL DEPICT AN AVERAGE REPRESENTATION OF PLANT MATERIALS SPECIFIED. A GRADE STAKE OR TAPE MEASURE TO BE USED IN PHOTO TO VERIFY SPECIFIED PLANT SIZE.
23. IN THE EVENT PROPOSED CANOPY TREES ARE IN CONFLICT (WITHIN 15') WITH PROPOSED OR EXISTING OVERHEAD UTILITY LOCATIONS, THE LANDSCAPE CONTRACTOR SHALL STOP WORK AND CONTACT LANDSCAPE ARCHITECT IMMEDIATELY FOR COORDINATION AND FIELD ADJUSTMENT.
24. IN THE EVENT PROPOSED CANOPY TREES ARE IN CONFLICT (WITHIN 15') WITH PROPOSED OR EXISTING LIGHT POLE LOCATIONS, THE LANDSCAPE CONTRACTOR SHALL STOP WORK AND CONTACT LANDSCAPE ARCHITECT IMMEDIATELY FOR COORDINATION AND FIELD ADJUSTMENT.



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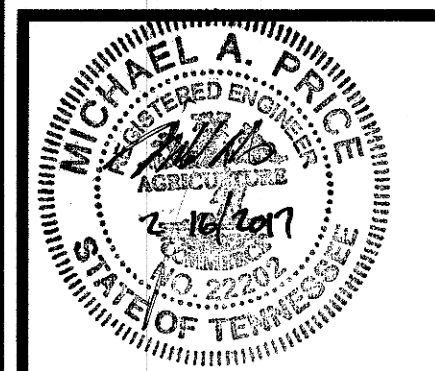
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SHRUB PLANTING

SCALE: NTS

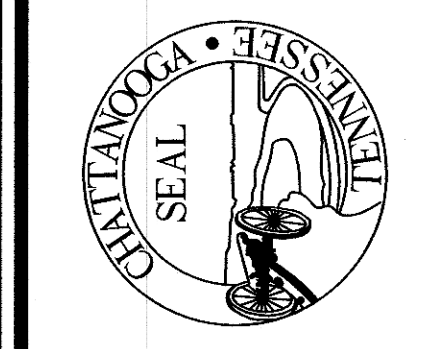
GROUND COVER PLANTING

SCALE: NTS



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8TH STREET & PINE STREET ROAD IMPROVEMENT PROJECT FOR: CITY OF CHATTANOOGA DEPARTMENT OF TRANSPORTATION



LANDSCAPE DETAILS

REVISIONS		
1	DATE ISSUED	02/16/17
2		
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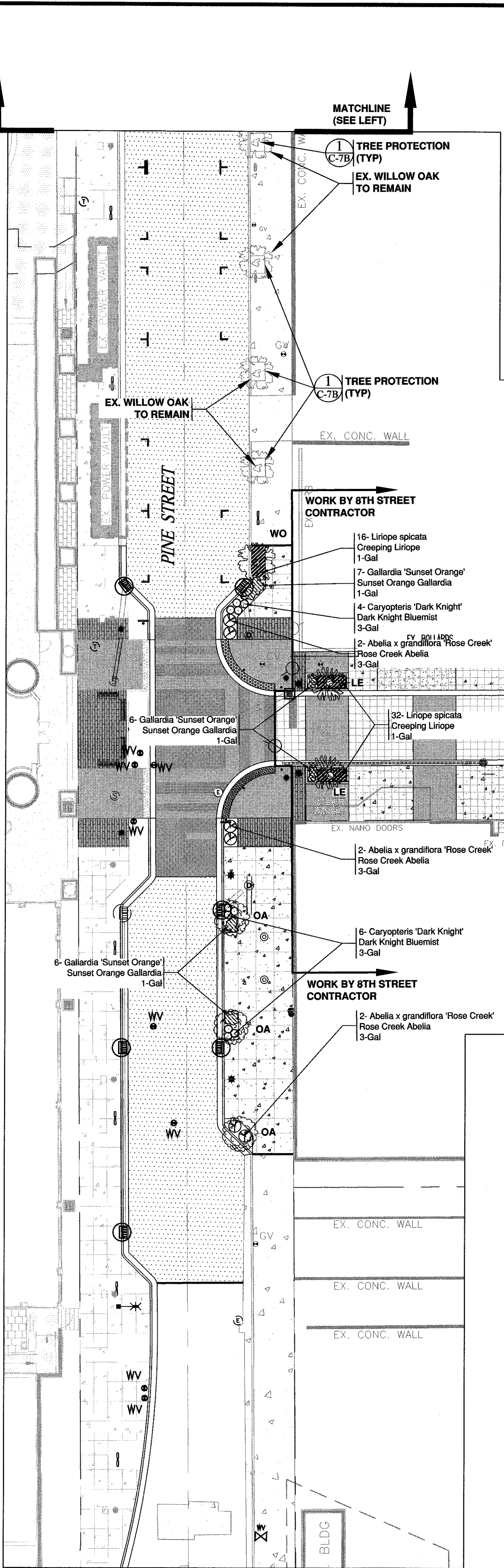
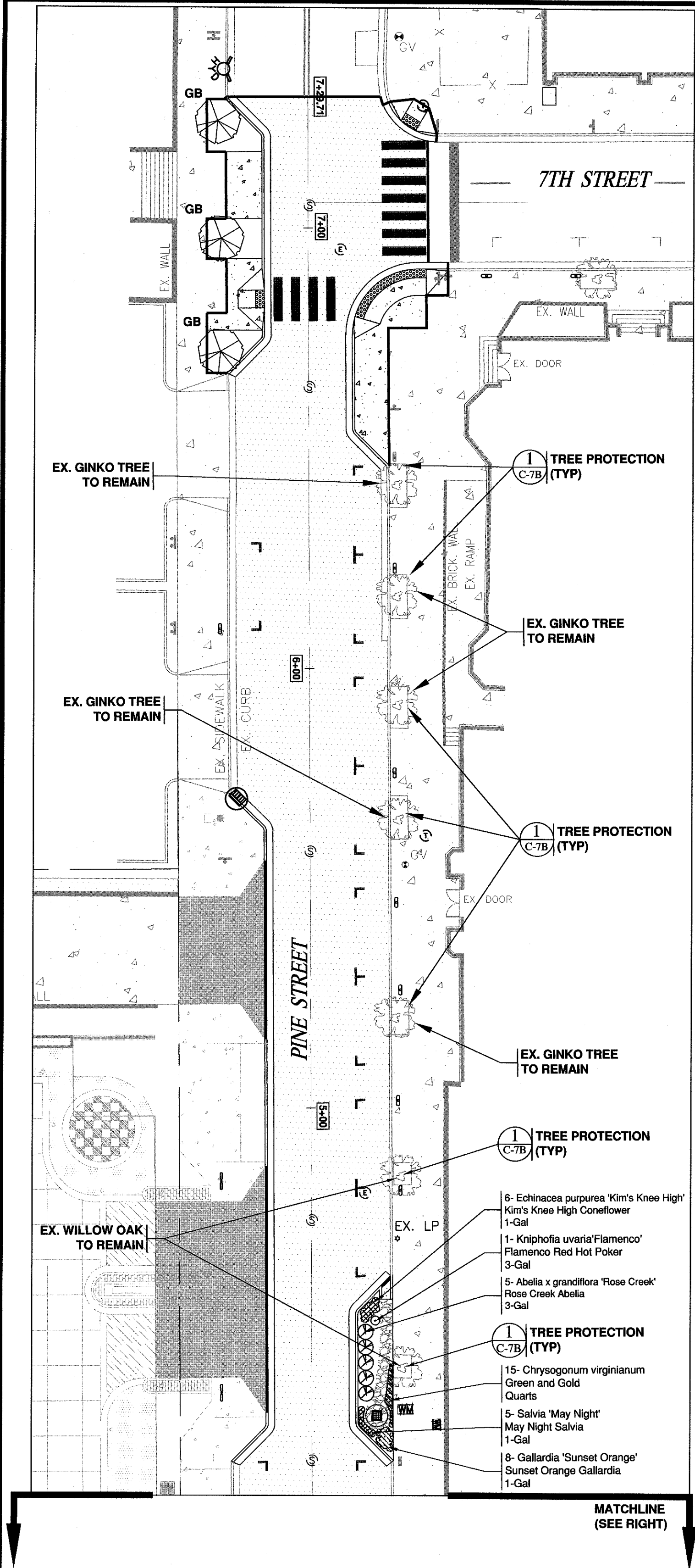
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SHEET NUMBER: L-1.1



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P. 423-521-7822

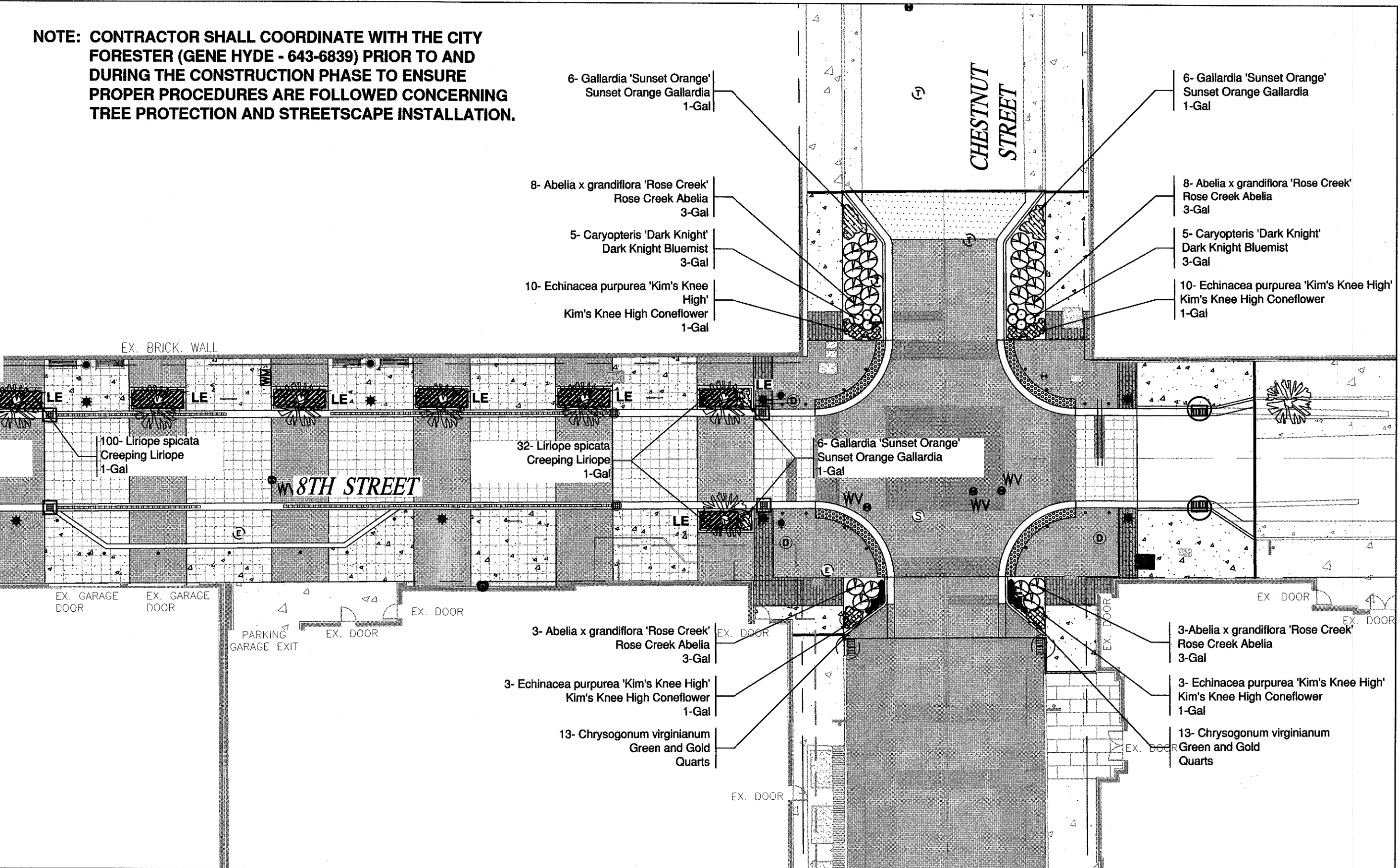




TREE SPECIFICATIONS					
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
LE	9	ULMUS PARVIFOLIA 'UPMIS' BOSQUE	LACEBARK ELM	2.5" CAL. MIN.	SEE PLANS
WO	1	QUERCUS PHELLOS	WILLOW OAK	2.5" CAL. MIN.	SEE PLANS
GB	3	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO TREE	2.5" CAL. MIN.	SEE PLANS
OA	3	QUERCUS LYRATA 'NIGHTLIGHTS'	MARQUEE OVERCUP OAK	2.5" CAL. MIN.	SEE PLANS

SHRUB AND GROUNDCOVER SPECIFICATIONS					
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
AB	33	ABELIA X GRANDIFLORA 'ROSE CREEK'	ROSE CREEK ABELIA	3-GAL	SEE PLANS
CK	20	CARYOPTERIS 'DARK KNIGHT'	DARK KNIGHT BLUEMIST	3-GAL	SEE PLANS
CG	41	CHRYSOSONUM VIRGINIANUM	GREEN AND GOLD	QUARTS	SEE PLANS
EC	32	ECHINACEA PURPUREA 'KIM'S KNEE HIGH'	KIM'S KNEE HIGH CONEFLOWER	1-GAL	SEE PLANS
GA	45	GALLARDIA 'SUNSET ORANGE'	SUNSET ORANGE GALLARDIA	1-GAL	SEE PLANS
KN	1	KNIPHOFIA UVARIA 'FLAMENCO'	FLAMENCO RED HOT POKER	3-GAL	SEE PLANS
LI	180	LIRIOPE SPICATA	CREeping LIRIOPE	1-GAL	SEE PLANS
SA	5	SALVIA 'MAY NIGHT'	MAY NIGHT SALVIA	1-GAL	SEE PLANS

NOTE: CONTRACTOR SHALL COORDINATE WITH THE CITY FORESTER (GENE HYDE - 643-6839) PRIOR TO AND DURING THE CONSTRUCTION PHASE TO ENSURE PROPER PROCEDURES ARE FOLLOWED CONCERNING TREE PROTECTION AND STREETScape INSTALLATION.



NOTE: CONTRACTOR SHALL INSTALL TREE PROTECTION WHERE INDICATED ON THIS PLAN PRIOR TO COMMENCING DEMOLITION/CONSTRUCTION ACTIVITIES (REFER TO PINE STREET DEMOLITION PLAN FOR LOCATIONS AND SEE DETAIL #1 ON SHEET C-7B FOR DETAILS).

GENERAL NOTES PERTAINING TO EXISTING TREES

JOB CONDITIONS:

PROTECTIONS: PROVIDE PROTECTION AS REQUIRED TO DESIGNATED LANDSCAPE IMPROVEMENTS TO AVOID DAMAGE CAUSED BY FALLING BUILDING MATERIALS OR THE REMOVAL OF MATERIALS RESULTING FROM EITHER CONSTRUCTION OR DEMOLITION OPERATIONS. EXISTING TREES AND OTHER PLANTINGS DESIGNATED TO REMAIN IN PLACE, SHALL BE PROTECTED FROM UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS; SKINNING AND BRUISING OF BARK; SMOTHERING OF TREES BY STOCKPILING MATERIALS OF ANY KIND WITHIN THE DRIP LINE; AND FROM EXCESS FOOT OR VEHICULAR TRAFFIC OR PARKING OF VEHICLES WITHIN THE DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND PLANTINGS TO BE LEFT STANDING.

TREE PROTECTION: INSTALL A SHIELD OF 1" X 4" WOODEN PLANKS COMPLETELY AROUND EACH TREE TRUNK FROM GROUND LEVEL TO WHERE THE TRUNK BEGINS TO "BRANCH OUT". ATTACH SUCH PROTECTION WITH 12 GAUGE GALVANIZED WIRE AROUND TREE TRUNK AT THE TOP, BOTTOM, AND MIDDLE OF THE PLANKING.

TREE PIT PROTECTION: PROTECT TREE PITS AND PIT VEGETATION FROM FALLING, SLIDING, OR WASHING BUILDING MATERIALS BY PLACING BALES OF STRAW AROUND THE PERIMETER OF EACH PIT OR OVER THE TOP OF THE PIT AS DIRECTED BY THE URBAN FORESTER. STRAW BALES SHALL REMAIN WHOLE AND UNBROKEN AND HAVE NO LOOSE STRAW THAT MAY BECOME SCATTERED AROUND THE AREA.

TREE REPAIRS: TREES AND/OR VEGETATION THAT HAVE BEEN DESIGNATED TO REMAIN AND THAT HAVE BEEN DAMAGED BY DEMOLITION OPERATIONS, ARE TO BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE URBAN FORESTER.

TREE REPLACEMENT: "TREE REPLACEMENT" IS DEFINED AS THE COMPLETE EXCAVATION OF AN EXISTING TREE AND ITS ROOT SYSTEM AND THE SUBSEQUENT PLANTING, BACK-FILLING, AND ADEQUATE FERTILIZATION AND WATERING OF ITS REPLACEMENT TREE FOR A PERIOD OF ONE YEAR AFTER PLANTING.

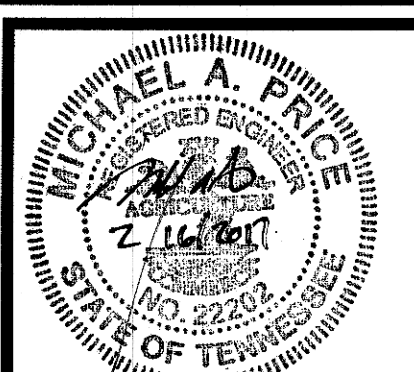
THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPLACE TREES THAT CANNOT BE REPAIRED AND RESTORED TO A HEALTHY STATUS, AS DETERMINED BY THE URBAN FORESTER. REPLACEMENT TREES SHALL BE IN GOOD HEALTH AND SHALL BE EQUAL IN SPECIES, HEIGHT, SHAPE, AND CALIPER TO THE TREE(S) BEING REPLACED.



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Landscape Plan

SCALE: 1" = 20'



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MAP ENGINEERS
L.L.C.

8TH STREET & PINE STREET
ROAD IMPROVEMENT PROJECT
FOR:
CITY OF CHATTANOOGA
DEPARTMENT OF TRANSPORTATION



LANDSCAPE
PLAN

REVISIONS

NO.	CITY COMMENTS	DATE
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