

Mercedes-Benz Dealership at Weldon Point

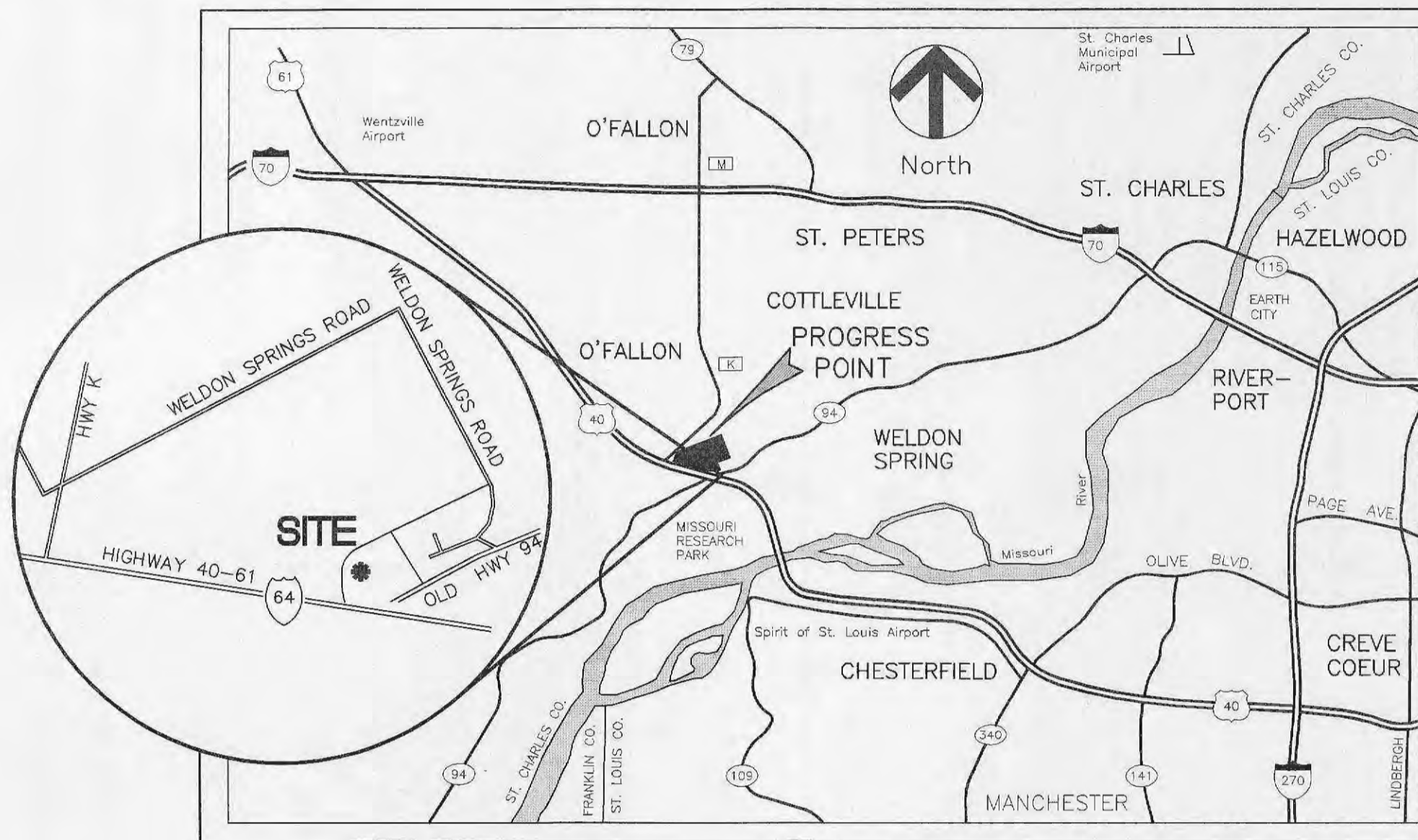
Soave Automotive

A TRACT OF LAND IN U.S. SURVEY 1796, TOWNSHIP 46 NORTH,
RANGE 3 EAST OF THE 5TH PRINCIPAL MERIDIAN LOCATED IN
CITIES OF O'FALLON AND WELDON SPRING, ST. CHARLES COUNTY, MISSOURI

SITE IMPROVEMENT PLANS

LEGEND

EXISTING CONTOURS	----- 450 -----
PROPOSED CONTOURS	----- 450 -----
EXISTING SEWER	----- ○ -----
PROP. STORM SEWER	----- ■ -----
PROP. SANITARY SEWER	----- ● -----
WATER MAIN	----- W -----
GAS MAIN	----- G -----
ELECTRIC	----- E -----
OVERHEAD WIRES	----- OH -----
CENTERLINE	-----
EASEMENT	-----
RAILROAD	-----
CONCRETE PAVEMENT	-----
EXISTING TREES	-----
EXISTING SPOT ELEVATION	+ 450.25
PROPOSED SPOT ELEVATION	+ 120.10
SWALE	-----
TO BE ABANDONED	T.B.A.
TO BE REMOVED	T.B.R.
TO BE REMOVED & REPLACED	T.B.R. & R.
TO BE USED IN PLACE	U.I.P.
BACK OF CURB	B.C.
FACE OF CURB	F.C.
ADJUST TO GRADE	A.T.G.
FIRE HYDRANT	⊕
POWER POLE	⊕
TRAFFIC FLOW	→
SOIL BORINGS	⊕ B-1
EXPLORER PIPELINE GAS MAIN	----- GAS -----



LOCATION MAP
(NOT TO SCALE)

PERTINENT DATA

MDNR PERMIT NO: MO-R107683
 EXISTING ZONING: PC - PLANNED COMMERCIAL
 OTC - OLD TOWN COMMERCIAL OVERLAY DISTRICT
 SITE ACREAGE: 6.37 ACRES ±
 SITE ADDRESS: 951 TECHNOLOGY DRIVE

UTILITIES:

WATER SERVICE
 MISSOURI AMERICAN WATER CO.
 535 NORTH NEW BALLAS ROAD
 ST. LOUIS, MO 63141
 PH. 314-996-2286
 CONTACT: BENJAMIN P. FREESE, P.E.

FIRE DISTRICT
 COTTLEVILLE FIRE PROTECTION DIST.
 P.O. BOX 385
 1385 MOTHERHEAD ROAD
 COTTLEVILLE, MO 63338
 CONTACT: MARK BOEHLE

ELECTRIC SERVICE
 AMERENUE - WENTZVILLE DISTRICT
 200 CALLAHAN ROAD
 WENTZVILLE, MO 63385
 PH. 636-639-8307
 CONTACT: SUREN MEHTA

GAS SERVICE
 LACLEDE GAS
 1999 TRADE CENTER EAST
 ST. PETERS, MO 63376
 PH. 636-978-2663 x103
 CONTACT: MIKE LANGAN

SEWER DISTRICT
 DUCKETT CREEK SEWER DISTRICT
 3550 HIGHWAY K
 O'FALLON, MO 63368-8616
 PH. 636-441-1244
 FAX 636-498-8150
 CONTACT: MIKE O'BRIEN

PHONE SERVICE
 SOUTHWESTERN BELL TELE.
 402 N. 3rd. STREET
 ST. CHARLES, MO 63301
 PH. 1-949-1320
 CONTACT: DEBBIE ESTES

MoDOT REVIEW OFFICE
 6780 OLD HIGHWAY "N"
 402 N. 3rd. STREET
 ST. CHARLES, MO 63304
 CONTACT: MR. SCOTTY D. WARD

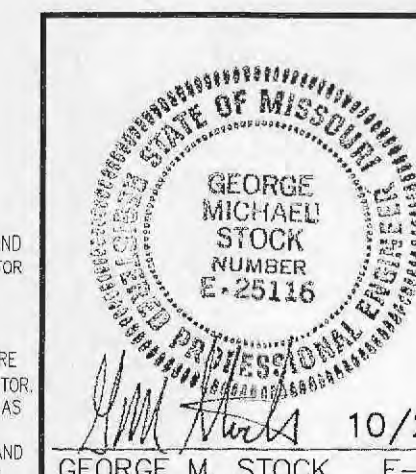
BENCHMARK

BENCHMARK STATION: SC-18
 ELEVATION = 61.55
 DESCRIPTION: BOTH THE STATION AND THE AZIMUTH MARK ARE STANDARD MO DNR ALUMINUM GR5 DISK. THE STATION IS STAMPED "SC-18, 1999". THE AZIMUTH IS STAMPED "SC-12, 1990". BOTH DISKS ARE SET IN 12 INCH DIAMETER BY 30 INCH DEEP CONCRETE MONUMENTS FLUSH WITH THE GROUND.

STATION AZIMUTH MARKS AND REFERENCE TIES: THE STATION IS LOCATED AT THE AUGUST A. BUSCH WILDLIFE AREA. IT IS IN THE GRASSY AREA WEST OF THE PAVED PARKING LOT FOR THE MAIN BUILDING OF THE BUSCH WILDLIFE AREA. THE STATION IS 24 FT. SOUTH OF THE CENTER OF THE ENTRANCE ROAD; 18 FT. WEST OF THE SERVICE DRIVE TO THE BACK OF THE BUILDING.

THE AZIMUTH MARK IS ABOUT 0.25 MILES WEST OF THE STATION AND NEAR THE SOUTHEAST CORNER OF THE PARKING LOT FOR THE AHDEN KNIGHT HAMPTON MEMORIAL LAKE. IT IS 89.0 FT. SOUTH-WEST OF THE NORTHWEST CORNER POST OF A RAIL FENCE AROUND THE PARKING LOT; 46.2 FEET NORTHWEST OF A RAIL FENCE POST.

11-3-05
APPROVED
 as noted



STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

INDEX

C1.0	TITLE SHEET
C2.0	SPECIFICATIONS SHEET
C3.0	EXISTING CONDITIONS PLAN
C4.0,C4.1	SITE AND GRADING PLANS
C5.0,C5.1	SITE GEOMETRICS/PAVEMENT DETAILS
C6.0,C6.1,C6.2	STORM SEWER PROFILES/DETAILS
C7.0,C7.1,C7.2	SANITARY SEWER PROFILES/DETAILS
C8.0	EROSION CONTROL PLAN
C9.0	DRAINAGE AREA PLAN

CONTRACTOR NOTE:

THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF WELDON SPRING AND/OR MoDOT. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR THE CITY OF WELDON SPRING AND/OR MoDOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILT OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF WELDON SPRING AND/OR MoDOT.

OWNER NOTE:

ONCE THE CONTRACTOR DELIVERS THE PROPERTY TO THE OWNER, THE OWNER SHALL BE RESPONSIBLE TO MAINTAIN ANY CONTROL MEASURE THAT IS TO REMAIN AS A PERMANENT STRUCTURE TO CONTROL SILTATION AND EROSION.

UTILITY NOTE:

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

10/20/05 - REVISED PER REVIEW COMMENTS
 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
 9/27/05 - REVISED PER MoDOT COMMENTS

UTILITY LOCATES

MISSOURI ONE-CALL
 1 800 344-7483
 MODOT
 (314) 340-4100
 CITY OF O'FALLON
 (636) 281-2858

SOAVE AUTOMOTIVE @ WELDON POINT
 TITLE SHEET

STOCK & ASSOCIATES
 Consulting Engineers, Inc.

257 Chesterfield Business Parkway
 St. Louis, MO 63005
 PH. (636) 530-9100
 FAX (636) 530-9130
 e-mail: general@stockassoc.com
 Web: www.stockassoc.com

RECEIVED
 OCT 21 2005
 BUILDING DEPT.

PREPARED FOR:
Soave Automotive
 3400 EAST LAFAYETTE
 DETROIT, MICHIGAN 48207
 Phone 313.567.5759
 Fax: 313.567.5763

DATE: 10/20/05	CHECKED BY: T.P.S.	DATE: 08/22/05	CHECKED BY: G.M.S.	DATE: 8/22/05	JOB NUMBER: 204-3319	SHEET: C1.0
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EROSION AND SEDIMENT CONTROL NOTES

1. Installation of perimeter sediment control shall be implemented as the first step of grading and within seven (7) days of grubbing the site.
2. Inspection of siltation control devices shall take place once every seven days and within 24 hours of any 0.5"/24 hour rain event. Any siltation control in need of repair shall occur immediately.
3. Any disturbed areas which will remain unworked for 14 days or more shall be stabilized with seeding and mulching per specifications within 7 days. If seasonal conditions prohibit seeding, mulching or matting shall be used.
4. All slopes or drainage channels, once constructed to final grade, shall be seeded and mulched per specifications within seven (7) days.
5. Silt fences shall be installed immediately around each storm sewer structure once final construction of each individual structure is complete.
6. All siltation control devices shall remain in place until upslope areas have been permanently stabilized.
7. The Contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The Contractor shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences (possible methods of control are detailed in the plan). Control shall commence with grading and be maintained throughout the project until acceptance of the work by the Owner and/or the City of Weldon Spring and/or MoDOT. The Contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or the City of Weldon Spring and/or MoDOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing pavement or in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or the City of Weldon Spring and/or MoDOT. Owner shall be responsible for structure to remain as permanent after construction is complete.
8. Erosion control shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties, and ditches.
9. When deemed necessary, positive steps should be exercised to prevent this soil from damaging adjacent property and silting up all storm drainage systems whether on or off site.

Straw Bale Siltation Control Specifications

Sheet Flow Applications

1. Bales shall be placed in a single row, lengthwise on the contour, with both ends of adjacent bales tightly abutting one another.
2. All bales shall be either wire-bound or string-tied. Straw bales shall be installed so that buildings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of the bindings). See Detail this sheet.
3. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill and shall be built up to 4 inches against the uphill side of the barrier (See detail this sheet).
4. Each bale shall be securely anchored by at least two stakes or rebar driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the sides together. Stakes or rebars shall be driven deep enough into the ground to securely anchor the bales.
5. The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales. (Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency).
6. Inspection shall be frequent and repair or replacement shall be made promptly as needed.
7. Straw bale barriers shall be removed when they have served their useful purpose and before the upslope areas have been permanently stabilized.

Channel Flow Applications

1. Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
2. The remaining steps for installing a straw bale barrier for sheet flow applications apply here, with the following addition.
3. The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale (see detail) to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

Siltation Control Schedule Implementation

1. Perimeter siltation control and construction entrances to be installed.
2. Begin placing aggregate base in parking areas once area has reached final grade to prevent erosion.
3. Place silt fence around each storm sewer structure as it is completed.
4. Immediately seed areas upon reaching final grade that are to be permanently seeded.

Maintenance

1. Straw bale barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
2. Close attention shall be paid to the repair of damaged fence, end runs and undercutting beneath fence.
3. Necessary repairs to barriers or replacement of silt fence shall be accomplished promptly.
4. Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
5. Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

Temporary Access Roads and Parking Areas Specifications

1. Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
2. Grades should be sufficient to provide drainage, but should not exceed 10 percent.
3. Roadbeds shall be at least 24 feet wide.
4. All cuts and fills shall be 3:1 or flatter to the extent possible.
5. Drainage ditches shall be provided as needed.
6. The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
7. A 10-inch course of 2" MINUS aggregate shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric may be applied to the roadbed for additional stability in accordance with fabric manufacturer's specifications.

Silt Fence Specifications

1. Silt Fence to be woven geotextile fabric Mirafi 100X or equal.
2. Fabric to be supported by metal tee posts with spade base spaced on 5' centers with 6 x 6/10 x 10 gage welded wire fence. See detail this sheet.
3. Fabric shall be entrenched and backfilled. A trench shall be excavated a minimum of 6 inches deep for the length of the fence. See detail this sheet.
4. Fence height shall be a minimum of 4 feet in height, with the fabric installed on the fence on the upstream side.
5. Silt fences shall be used only on sheet flow conditions.
6. Silt fences shall be installed around all storm sewer structures.

Maintenance

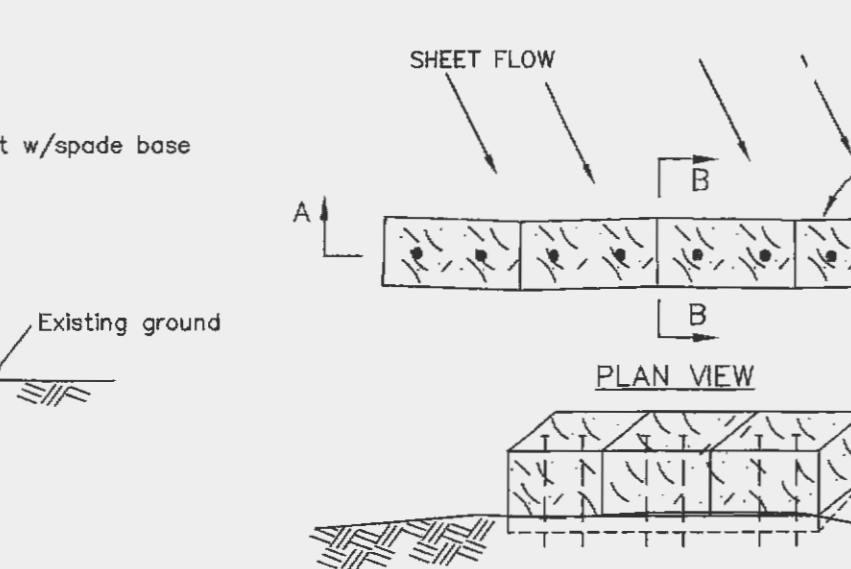
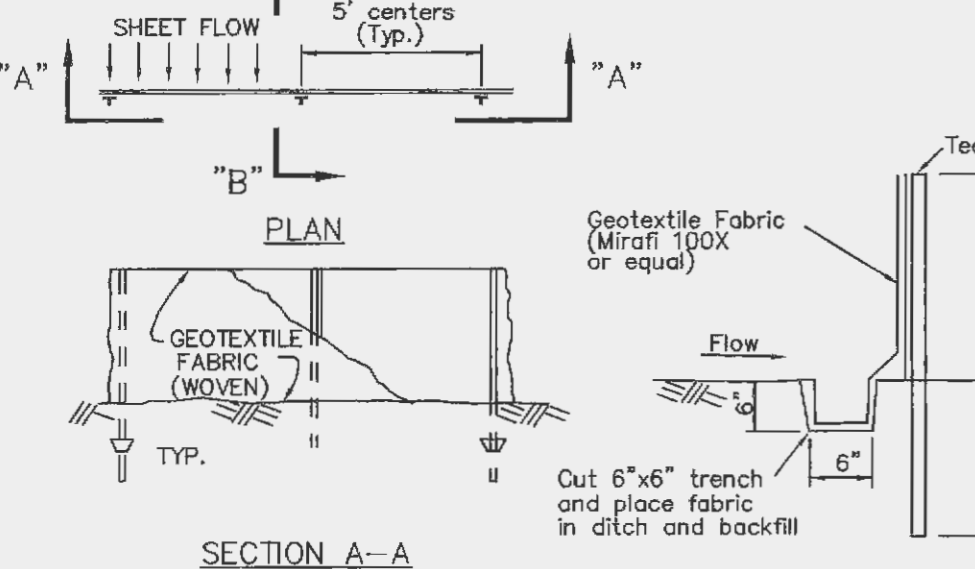
1. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
2. Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.
3. Necessary repairs to barriers or replacement of bales shall be accomplished promptly.
4. Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
5. Any sediment deposits remaining in place after the silt fence barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

Vegetation

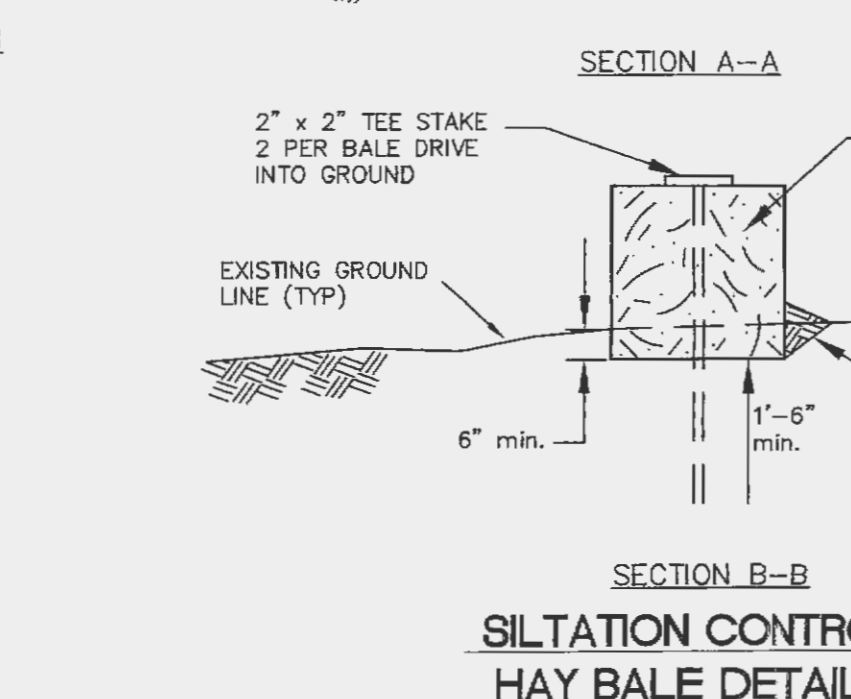
All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

Maintenance

1. Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. Seeded areas adjacent to the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.
2. All erosion control systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in 1/2 inch of rain or more.



- SILTATION CONTROL SILTFENCE DETAIL**
(n.t.s.)
- GENERAL NOTES:**
1. Do not scale drawing. Follow Dimensions.
 2. Siltation Control Devices to remain in place until adequate vegetative growth insures no further erosion of the soil.
 3. Siltation Fences shall be inspected periodically for damage and for the amount of sedimentation which has accumulated. Removal of sediment will be required when it reaches 1/2 of its height of the siltation fence.
 4. Straw Bales shall be inspected periodically for deterioration. Bales which have rolled or failed shall be replaced.
 5. Attachment of Geotextile Fabric to be in accordance with the manufacturer's recommendation.



GENERAL NOTES

1. BOUNDARY AND TOPOGRAPHIC SURVEY BY STOCK & ASSOCIATES.
2. ALL UTILITIES SHOWN HAVE BEEN LOCATED BY SURVEY AND RECORD INFORMATION. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
3. NO SLOPE SHALL BE STEEPER THAN 3:1.
4. SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) PER THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS. THE MAP IS IDENTIFIED AS MAP NO. 29183C0430 E, WITH A MAP REVISION DATE OF AUGUST 2, 1996.
5. ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
6. ALL UTILITIES SERVING SITE ARE UNDERGROUND.
7. ALL OUTSIDE TRASH CONTAINERS, HVAC UNITS, ELECTRIC, TELEPHONE AND GAS METERS, SATELLITE DISHES, AND ROOFTOP MECHANICAL APPARATUS SHALL BE THOROUGHLY SCREENED WITH MATERIALS AND/OR LANDSCAPING TO CONCEAL THE VISIBILITY OF SUCH ITEMS FROM THE VIEW OF RIGHTS-OF-WAY AND/OR ADJACENT PROPERTIES AS APPROVED BY THE PLANNING AND ZONING COMMISSION.
8. ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF WELDON SPRING STANDARDS.
9. SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS AND DETAILS.
10. HANDICAP STALL LOCATIONS ARE TO BE DETERMINED AND COORDINATED WITH THE CITY OF WELDON SPRING.
11. ROOF TOP MECHANICAL EQUIPMENT WILL BE PROHIBITED. THE GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE FULLY SCREENED WITH LANDSCAPING OR SOLID MATERIALS.
12. ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. NOTE THAT THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS IS TO CORRESPOND TO THE COMPACTIVE EFFICIENCY AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF WELDON SPRING PRIOR TO THE PLACEMENT OF FILL. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF WELDON SPRING.
13. DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
14. ENSURE SIDEWALKS, CURB RAMPS, RAMP AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER. ENSURE AT LEAST ONE 8' WIDE HANDICAP AISLE IS PROVIDED AND CURB RAMPS DO NOT PROJECT INTO THE HANDICAP ACCESS AISLE. ALL HANDICAP RAMPS ARE TO BE CONCRETE.
15. LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.
16. ALL PAVED ROADWAYS GOING ON AND OFF SITE WILL BE KEPT FREE OF DIRT, ROCKS, GRAVEL OR OTHER MATERIALS DURING CONSTRUCTION.
17. RIP RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED IF NECESSARY TO REDUCE EROSION ON AND OFF SITE.
18. CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER RECOMMENDATIONS. CONTRACTOR SHOULD FAMILIARIZE THEMSELVES WITH ALL THE GEOTECHNICAL REPORTS. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ANY ROCK ENCOUNTERED.
19. A SEPARATE SIGN PERMIT WILL BE REQUIRED FOR SIGNS.

VEGETATION ESTABLISHMENT

TILLAGE PREPARATIONS
*TILL TOP 4" OF SOIL

FERTILIZER
* PER SOIL TEST OR FOLLOWING TABLE:

	N	P	K	LIME
TEMPORARY SEEDING	0.7	0.7	0.7	14 ENM+
PERMANENT	1.0	1.4	1.4	14 ENM+

+ SOIL TEST RESULTS TAKE PRECEDENCE, DUE TO HIGHLY VARIABLE SOIL PH.

SEEDING RATES

	SEEDING PERIODS	SEEDING RATES
TEMPORARY	WHEAT OR RYE	150 LBS. / ACRE
PERMANENT	FESCUES	150 LBS. / ACRE
	KENTUCKY BLUEGRASS/ PERENNIAL RYEGRASS/ FINE FESCUE	8 LBS. / 1000 S.F. 8 LBS. / 1000 S.F.
	SEEDING PERIODS	MARCH 1 - JUNE 1 AUGUST 1 - OCTOBER 1 MARCH 15 - NOVEMBER 1

*Developer must supply City construction inspectors with soil reports prior to or during site soil testing. The soil report will be required to contain the following information on soil test curves (Prior reports for projects within the City)

1. Maximum dry density. 2. Optimum moisture content. 3. Maximum and minimum allowable moisture content.
4. Curve must be plotted to show density from a minimum of 40% compaction and above as determined by the Modified AASHTO-T-180 (Compaction Test) (A.S.T.M.-D-1557) or from a minimum of 95% as determined by the "Standard Practice Test AASHTO-T-99, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
5. Curve must have at least 5 density points with moisture content and sample location listed on document. 6. Specific gravity. 7. Natural moisture content. 8. Liquid limit. 9. Plastic limit. Be advised that if this information is not provided to the City's Construction Inspector the City will allow grading or construction activities to proceed on any project site.

STORM SEWER NOTES

1. ALL CONCRETE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C76-80 CLASS III UNLESS NOTED.
2. ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE SHALL BE DESIGNED PER METROPOLITAN ST. LOUIS SEWER DISTRICT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES".
3. TYPE "C" BEDDING IS REQUIRED FOR PIPES IN ROCKS.
4. ALL TRENCH BACKFILLS UNDER PAVEMENT SHALL BE GRANULAR BACKFILL.
5. JETTING IS NOT A PERMITTED METHOD OF COMPACTION ON SEWER TRENCHES. BACKFILL MUST BE SUITABLE SOILS & COMPACTED TO 95 % OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY. (APPLIES TO TRENCHES THAT DO NOT REQUIRE GRANULAR BACKFILL)
6. ALL CURB INLETS AND AREA INLETS TO HAVE 5/8" TRASH BAR ACROSS INLET OPENINGS.
7. "O" RING PIPE TO BE USED ON ALL STORM SEWERS.
8. GRANULAR BACKFILL TO BE PLACED WITH A MINIMUM OF 1:1:H:1V SLOPE FROM EDGE OF PAVEMENT.
9. BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
10. PROVIDE 36" MINIMUM COVER FOR STORM SEWERS.
11. PROVIDE CONCRETE GRADES FOR ROP AND CONCRETE ENCASEMENTS FOR HOPE AT CROSSING WITH SANITARY SEWER.
12. COMPACTED ROCK BACKFILL IS REQUIRED IN THE DISTURBED GROUND AROUND THE STRUCTURE OF ALL DROP STRUCTURES.
13. ALL STORM SEWERS ARE TO BE CONSIDERED PRIVATE, UNLESS OTHERWISE NOTED.
14. CONTRACTORS TO PROVIDE ALTERNATE BID FOR ADS N-12 ULTRA WT OR EQUAL (SMOOTH INTERIOR) AASHTO TYPE "S" (N-12 ULTRA WT).
15. JOINTS SHALL BE GASKETED O-RING TYPE PER CITY OF FALLON.

ALT. STORM SEWER NOTES

SPECIFICATIONS AND TECHNICAL DATA:

- Applicable specifications and installation guidelines:
1. ASTM F 405, Standard Specification for Corrugated Polyethylene Pipe and Fittings.
 2. ASTM F 667, Standard Specification for Large Diameter corrugated Polyethylene Pipe and Fittings.
 3. AASHTO M252, Standard Specification for Polyethylene Corrugated Drainage Pipe.
 4. AASHTO M 294, Standard Specification for corrugated Polyethylene Pipe, 12" to 36" diameter.
 5. ASTM D 2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.

ADS Corrugated polyethylene pipe is a flexible conduit. When properly installed, ADS pipe has excellent compressive load bearing strength. It is suitable for use under H20 and E80 live loads, or with fill heights in excess of 50 feet. To ensure maximum performance, ADS pipe should be installed in accordance with the following recommendations:

- Installation Recommendations:**
1. Crushed stone, gravel or compacted soil backfill material should be used as the bedding and envelope material.
 2. The corrugated pipe should be laid on grade, on a layer of bedding material. If native soil is used as the bedding and backfill material, it should be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
 3. Either flexible (asphalt) or rigid (concrete) pavements may be laid as part of the minimum cover requirements.
 4. Site conditions and availability of bedding materials often dictate the type of installation method used.
 5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a minimum compaction level of 85% is required. This is the same minimum compaction that is recommended by all drainage pipe manufacturers and can be achieved by various compaction methods.
 6. ADS recommends that N-12 pipe be installed in accordance with ASTM D 2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.

H.D.P.E. STORM SEWER NOTES:

1. STORM SEWER PIPE DESIGNATED AS HIGH DENSITY POLYETHYLENE (H.D.P.E.) SHALL HAVE WATER TIGHT GASKETED JOINTS WITH RUBBER O-RING GASKETS MEETING ASTM F477. O-RING GASKET SHALL BE INSTALLED ON THE SPIGOT END OF PIPE.
2. 12" TO 36" PIPE SHALL CONFORM TO THE AASHTO M284 CLASSIFICATION "TYPE S" AND 42" TO 48" SHALL CONFORM TO AASHTO M86-95 CLASSIFICATION "TYPE D."
3. ALL PIPE JOINTS SHALL CONSIST OF BELL AND SPIGOT JOINING SYSTEM WITH THE BELL COVERING TWO PIPE CONNECTIONS AS RECOMMENDED IN AASHTO M294.
4. PIPE MANUFACTURED FOR THIS SPECIFICATION SHALL COMPLY WITH THE REQUIREMENTS FOR TEST METHODS, DIMENSIONS AND MARKINGS FOUND IN AASHTO DESIGNATIONS M252 AND M294. PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN PE COMPOUNDS WHICH CONFORM WITH THE REQUIREMENTS OF CELL CLASS 3354200 AS DEFINED AND DESCRIBED IN ASTM D3350.
5. FITTINGS MAY BE EITHER MOLDED OR FABRICATED AND SHALL CONFORM TO THE REQUIREMENTS AASHTO M252 AND M294. THE FITTINGS SHALL NOT REDUCE OR IMPAIR THE OVERALL INTEGRITY OR FUNCTION OF THE PIPE LINE. ONLY FITTINGS SUPPLIED OR RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED.
6. INSTALLATION OF THE PIPE SPECIFIED ABOVE SHALL BE IN ACCORDANCE WITH THE ASTM RECOMMENDED PRACTICE D3321.
7. BOTH BELL AND SPIGOT (WITH O-RING GASKET) ENDS OF THE PIPE SHALL BE LUBRICATED AS RECOMMENDED BY MANUFACTURER AND INSERTED TO THE HOING MARK ON THE SPIGOT END OF THE PIPE.
8. MINIMUM RECOMMENDED TRENCH WIDTH SHALL BE NOT LESS THAN THE GREATER OF EITHER PIPE OUTSIDE DIAMETER PLUS 16 INCHES OR THE PIPE OUTSIDE DIAMETER TIMES 1.25, PLUS 12 INCHES AS OUTLINED HEREIN.

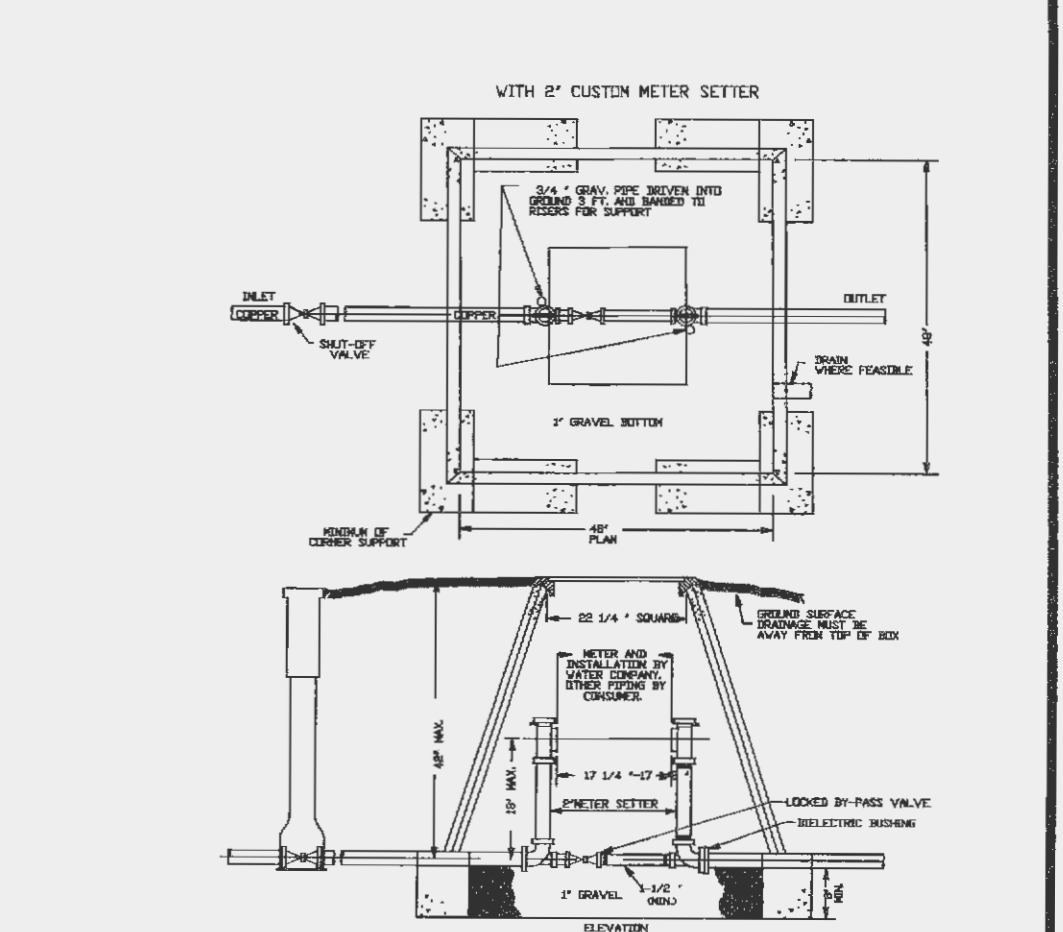
NOMINAL PIPE DIAMETER	MINIMUM TRENCH WIDTH
12" (300mm)	31"
15" (375mm)	34"
18" (450mm)	39"
24" (600mm)	42"
30" (750mm)	50"
36" (900mm)	66"
42" (1050mm)	71"
48" (1200mm)	78"

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

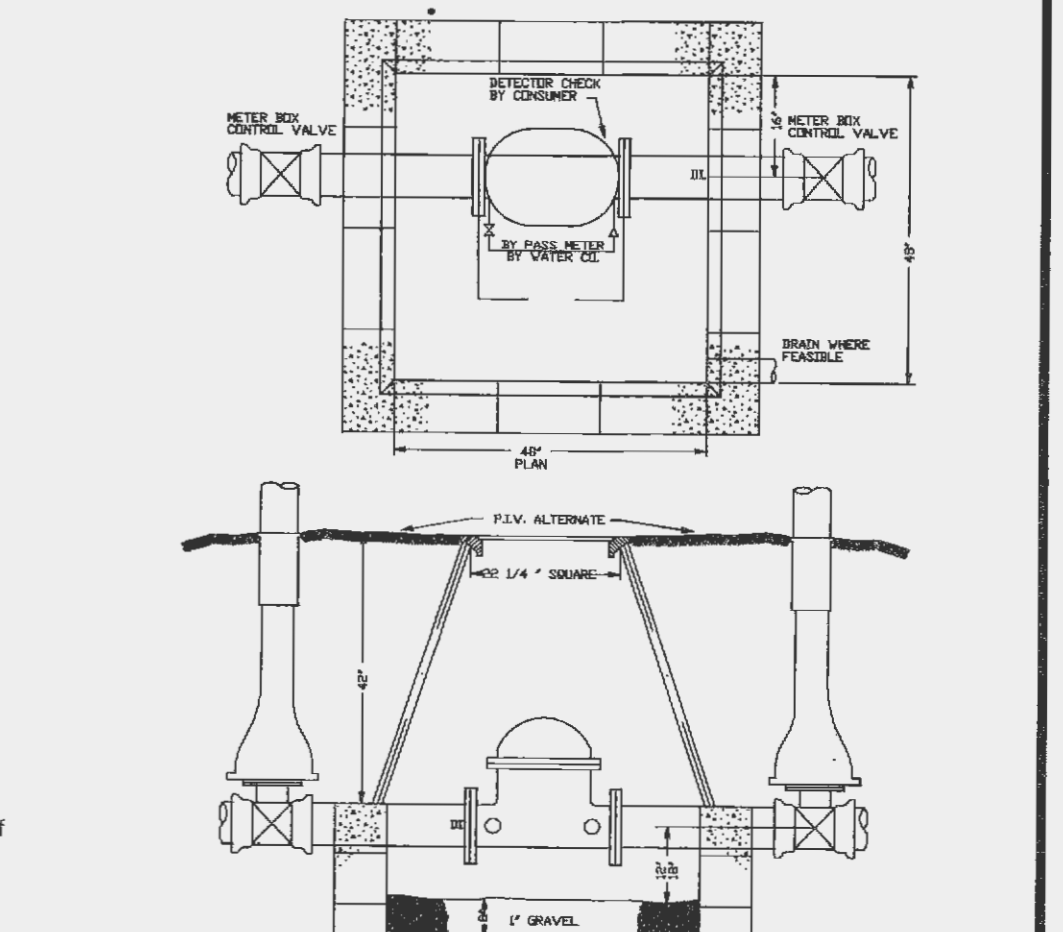
1. Underground utilities have been plotted from available information and therefore location shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of improvements.
2. Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
3. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
4. All fill including places under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM D1557). All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proofrolling and compaction.
5. The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
6. All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
7. Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plan.
8. All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
9. The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
10. All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2-1/2 feet.
11. All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
12. All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
13. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
14. All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
15. All creek crossings shall be grouted rip-rap as directed by District Inspectors. (All grout shall be high slump ready-mix concrete).
16. Brick shall not be used on sanitary sewer manholes.
17. Existing sanitary sewer service shall not be interrupted.
18. Maintain access to existing residential driveways and streets.
19. Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
20. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
21. "Type N" Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.

M.A.W.C. WATER LINE NOTES

1. The service connection will require the plumber to purchase a top at least two weeks prior to when the meter is. As a general rule Missouri American Water Co. makes the taps in the order in which they are received, and cannot guarantee two weeks during a busy time of the year. Once the top is purchased the plumber has to schedule it with the District Supervisor. The plumber has to have all required information, plus Missouri American Water requires two sets of a site plan showing the proposed layout and elevations. Along with this Missouri American Water Co. can insure that they are able to provide the required flow. The only fee is the actual cost of the top itself. The tapping fee is different for every combination of pipe size and top size and is based on previous year's actual costs.
2. The footing of the building must be in before Missouri American Water Co. will make a top. Missouri American Water does not make tops for vacant lots or previous to substantial building construction.
3. A minimum Class 52 ductile iron pipe, conforming to applicable ANWA standards, is required on any service line that is 4" or greater in size before a meter. Copper piping is required for smaller services from the main through the meter box. For services smaller than 4" in size, flexible type "K" copper is required through the stop box. After the stop box, flexible or rigid type "K" or "T" copper is required to four feet beyond the meter box. For larger services, ductile iron pipe should run from the main to a point at least six feet beyond the meter box. From the building foundation, copper or ductile iron pipe must extend a minimum of ten feet outside the building wall. Once a fire line is past a detector check meter it is considered to be metered and any materials can be used that comply with the local plumbing codes (C-900 PVC is the minimum). A "Master Service" would not meter.
4. The joints on copper service lines (excluding joints on pre-purchased "meter services" shall be either flared, compression, or silver soldered.
5. Existing services will have to be located at the main unless they are being reused. Permission to reuse a service (either permanently or temporarily) must come from the District Supervisor.
6. Missouri American Water does not own, operate, or maintain service lines. As a general rule St. Louis Co. Water does not allow a water main extension on a project which can be served by a service line.
7. Missouri American Water Co. requires a detector check valve on all fire protection lines for sprinkler systems. They also require a detector check valve on fire hydrants, with the possible exception of hydrants that are immediately adjacent to and visible from public streets. Missouri American Water also requires valves on both fire and domestic lines after they split from a combined service. Thus a typical split service would have valves on both fire and domestic lines after they split. A fire line requires a valve on a line going to a fire hydrant that come off of a "Master Water Service".



METER BOX FOR 1 1/2" - 2" & 2 1/2" SERVICES



DETECTOR CHECK VAULT FOR 4", 6", 8" FIRE SERVICES

COTTLEVILLE FIRE PROTECTION DISTRICT NOTES

1. The fire department connection will be located within 150'-ft. of a fire hydrant. See Fire Sprinkler Site Plan by others.
2. See site plan for watermain sizes.
3. The minimum fire flow from a single fire hydrant shall be two thousand (2000) gallons per minute at twenty (20) psi residual pressure.
4. Each fire hydrant shall have not less than two 2 1/2 inch outlets and one 4 1/2 inch outlet, a 5 1/4 inch valve, a 6 inch barrel and shall be of the breakaway design, frost free with chain, left hand open design and have National Standard Threads.
5. Each fire hydrant shall be provided with a control valve in the hydrant connection such that the hydrant can be removed from service without shutting off water supply to other fire hydrants.
6. The fire hydrants to be set to the final grade, not less than 18-in. from center of a hose nozzle outlet to finish grade.
7. There shall be no obstruction, i.e., plantings, bushes, trees, signs, light standards, mailboxes, etc. within six (6) feet of any fire hydrant, and/or fire department connection to an automatic sprinkler system.
8. The hydrants on the system side of the detector check/meter vault will be private and painted red.

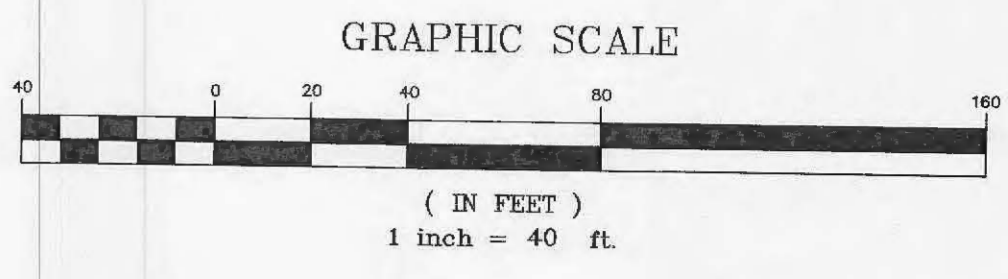
- 10/20/05 - REVISED PER REVIEW COMMENTS
- 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
- 9/27/05 - REVISED PER MDOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT SPECIFICATION SHEET

10/20/05
GEORGE M. STOCK E-25116

DRAWN BY: T.P.S. DATE: 08/22/05
CHECKED BY: G.M.S. DATE: 8/22/05
JOB NUMBER: 204-3319
SHEET: C2.0

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: georal@stockassoc.com
Web: www.stockassoc.com



PROPERTY DESCRIPTION
PARCEL 1
AREA DE-ANNEXED INTO WELDON SPRING

A tract of land being part of Lot C of Progress Point, a subdivision according to the Plat thereof recorded in Plat Book 38, Pages 310 thru 313 of the records of the Recorder of Deeds Office in St. Charles County, Missouri and being located in U.S. Survey 1796, Township 46 North, Range 3 East of the Fifth Principal Meridian, City of O'Fallon, St. Charles County, Missouri and being more particularly described as follows:

Beginning at a Southeastly corner of above said Lot C, said point also being located at the point of intersection of the Northerly line of Missouri State Highway 40TR, (US Route 40-61), variable width, as established by instrument recorded in Book 2740, Page 1733 of the above said records with the Northerly line of Old Highway 94, variable width; thence along last said Northerly line North 78 degrees 57 minutes 41 seconds West 272.35 feet; thence departing last said Northerly line North 23 degrees 03 minutes 31 seconds East 589.90 feet to the a point on the Southerly line of Technology Drive, variable width, said point also being located on a non-tangent curve to the left for which the radius point bears North 23 degrees 03 minutes 31 seconds East 430.00 feet; thence along last said Southerly line and said curve with a chord which bears South 81 degrees 18 minutes 44 seconds East 213.45 feet on an arc length of 215.70 feet; thence departing last said Southerly line South 29 degrees 05 minutes 14 seconds East 58.96 feet to a point on the Northwesterly line of a tract of land as conveyed to Technology Drive, L.L.C. by instrument recorded in Book 3745, Page 774 of the above said records thence along last said Northwesterly line and the Northwesterly and Westerly lines of Parcels 3 and 4 of a tract of land as conveyed to Mountain Farm, L.L.C. by instrument recorded in Book 2393, Page 1456 of the above said records, the following courses and distances: South 43 degrees 21 minutes 39 seconds West 332.88 feet to the point on a non-tangent curve to the left for which the radius point bears South 46 degrees 38 minutes 27 seconds East 72.00 feet; thence along last said curve with a chord which bears South 08 degrees 33 minutes 36 seconds West 82.18 feet on an arc length of 87.46 feet to a point of tangency; South 26 degrees 14 minutes 21 seconds East 174.37 feet to a point on the Northwesterly line of above said Old Highway 94, variable width; thence along last said Northwesterly line South 67 degrees 42 minutes 39 seconds West 34.44 feet to the POINT OF BEGINNING and containing 112,953 square feet or 2.593 acres more or less according to calculations performed by Stock and Associates Consulting Engineers, Inc. on May 24, 2005

PROPERTY DESCRIPTION
PARCEL 2

A tract of land being part of a larger tract as conveyed to Technology Drive, L.L.C. by instrument recorded in Book 3745, Page 774, part of Old Highway 94, variable width, part of a larger tract as conveyed to Mountain Farm, L.L.C. by instrument recorded in Book 2393, Page 1456, all of a tract as conveyed to Dean Jackson Real Estate, Inc. by instrument recorded in Book 673, Page 161, all of a tract as conveyed to Chapman Ventures, L.L.C. by instrument recorded in Book 4053, Page 735, and all of a tract as conveyed to Technology Drive, L.L.C. by instrument recorded in Book 4095, Page 116 of the records of the Recorder of Deeds Office in St. Charles County, Missouri, and being located in U.S. Survey 1796, Township 46 North, Range 3 East of the Fifth Principal Meridian, City of Weldon Spring, St. Charles County, Missouri, and being more particularly described as follows:

Beginning at a Southeastly corner of Lot C of Progress Point, a subdivision according to the Plat thereof recorded in Plat Book 38, Pages 310 thru 313 of the above said records, said point also being located at the point of intersection of the Northerly line of Missouri State Highway 40TR, as established by instrument recorded in Book 2740, Page 1733 of the above said records with the Northerly line of Old Highway 94, variable width; thence along the Southeastly line of said Lot C, said point also being the Northwesterly line of above said Old Highway 94; North 67 degrees 42 minutes 39 seconds East 34.44 feet; to the Westerly line of Parcel 3 of above said Mountain Farm, L.L.C. tract thence along the Westerly and Northwesterly lines of Parcels 3 and 4 of said Mountain Farm, L.L.C. tract and the Northwesterly line of above said Technology Drive, L.L.C. tract the following courses and distances: North 26 degrees 14 minutes 21 seconds West 174.37 feet to a point of curvature to the right for which the radius point bears North 63 degrees 45 minutes 39 seconds East 72.00 feet; thence along last said curve with a chord which bears North 08 degrees 33 minutes 36 seconds East 82.18 feet on an arc length of 87.46 feet; thence departing last said curve North 43 degrees 21 minutes 39 seconds East 332.88 feet to a point on the Northwesterly line of above said Technology Drive, L.L.C. tract; a point on the Northwesterly line of above said Missouri State Highway 40TR; thence along a line being 4.85 feet Eastery of and parallel with the Westerly line of said Technology Drive, L.L.C. tract South 26 degrees 14 minutes 21 seconds East 398.82 feet to the Northerly line of above said Old Highway 94; thence South 26 degrees 27 minutes 22 seconds East 61.45 feet to a point on the Southeastly line of above said Old Highway 94, said point also being the Northeastly corner of above said Dean Jackson tract; thence along the Easterly line of said Dean Jackson tract South 32 degrees 28 minutes 07 seconds North 181.67 feet to the Northerly line of Missouri State Highway 40TR; thence along said Northerly line the following courses and distances: South 86 degrees 58 minutes 21 seconds West 179.24 feet to a point being 186.26 feet Northerly perpendicular distance from centerline station 536+00 of above said Missouri State Highway 40TR; North 58 degrees 46 minutes 53 seconds West 75.15 feet to a point being 202.00 feet Northerly perpendicular distance from above said centerline station 536+00 of above said Missouri State Highway 40TR; North 80 degrees 20 minutes 37 seconds West 118.48 feet to the point of intersection of the Southeastly line of above said Old Highway 94; North 80 degrees 20 minutes 37 seconds West 75.54 feet to a point being 190.00 feet radial distance Northerly from above said centerline station 536+00 of above said Missouri State Highway 40TR; North 79 degrees 19 minutes 47 seconds West 38.73 feet to the POINT OF BEGINNING and containing 164,388 square feet or 3.774 acres more or less according to calculations performed by Stock and Associates Consulting Engineers, Inc. on May 24, 2005

LEGEND
(T.B.R.) - TO BE REMOVED
(U.I.P.) - USE IN PLACE

- ▲ 10/20/05 - REVISED PER REVIEW COMMENTS
- ▲ 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
- ▲ 9/27/05 - REVISED PER MO&D COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT
EXISTING CONDITIONS PLAN

STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

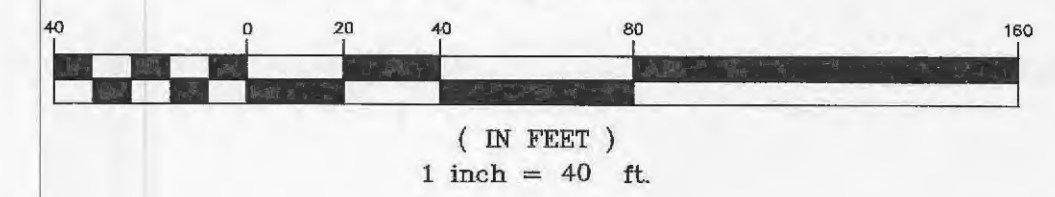


SEE SHEET C4.1 FOR CONTINUATION

"CITIMORTGAGE"
PROGRESS POINT
BOOK 38, PG. 310-313

LOT B
ZONED HTCD

GRAPHIC SCALE



PARKING CALCULATIONS

REQUIRED PARKING BUILDING 1:	
SERVICE, 2 SPACES PER SERVICE BAY	
21 STALLS @ 2 PER STALL (12,000 ± S.F.)	= 42 SPACES
PARTS: 1 SPACE PER 300 S.F. FLOOR AREA	
4,000 ± S.F. @ 1/300	= 14 SPACES
SHOWROOM/OFFICE: 1 SPACE PER 250 S.F.	
21,510 ± S.F. @ 1/250	= 87 SPACES
TOTAL REQUIRED	= 143 SPACES
TOTAL PROVIDED	= 292 SPACES

GENERAL NOTES

- SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN PER THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS. THE MAP IS IDENTIFIED AS MAP NO. 29183C0430 E, WITH A MAP REVISION DATE OF AUGUST 2, 1996.
- SITE COVERAGE CALCULATIONS:

TOTAL SITE	= 6.370 Ac.± or 277,342 s.f.± (100%)
BUILDING AREA	= 0.86 Ac.± or 37,510 s.f.± (13.5%)
PAVEMENT AREA	= 3.19 Ac.± or 139,125 s.f.± (50.2%)
SIDEWALK AREA	= 0.11 Ac.± or 5,000 s.f.± (1.8%)
WALKING TRAIL	= 0.15 Ac.± or 6,300 s.f.± (2.3%)
DISPLAY PODS	= 0.14 Ac.± or 6,100 s.f.± (2.2%)
GREEN AREA	= 1.91 Ac.± or 83,307 s.f.± (30.0%)
- PROPOSED BUILDING: AUTOMOBILE DEALERSHIP

BUILDING AREA	= 37,510 s.f.±
TOTAL SITE	= 277,342 s.f.±
BLDG. COVERAGE (FAR)	= 0.135
- ZONING: PC (PLANNED COMMERCIAL)
 REQUIRED SETBACKS:
 (A) FRONT YARD - THIRTY FEET
 (B) SIDE YARD - THIRTY FEET
 (C) REAR YARD - THIRTY FIVE FEET
- PROPOSED BUILDING HEIGHT = 30'± (1-STORY)

NOTE FROM M.A.W.C.

Thank you for the opportunity to review the plans for the above-referenced project. Within the proposed project area, we have an 18-inch water line located in easement that crosses the proposed new parking lot. It appears from our review of the easement language that installation of a parking lot above the water main is not prohibited, however, the easement does prohibit the cover above the main to be less than 3 ft or more than 8 ft. From our initial review of the plans, it appears cuts above the main have been minimized, however where cuts are proposed greater than 0.5 ft our existing main shall be field located by your contractor to verify depth of our main. Please contact us in advance so we can be present during the investigation so we can better make a decision on how to proceed.

The 18-inch main is a major transmission main in the distribution system and damage to this main can cause extensive damage to the area and your development and inhibit our system from meeting water demand needs for our customers. Please be aware that it is the responsibility of your contractor to verify the exact location of our facilities prior to any excavation. An approximate location of our facilities can be obtained by contacting our System Records Department at 314-996-2244. The contractor should use care when working around these facilities. The contractor will be responsible for any damage to our facilities caused by his construction activities.

Sincerely,

 Benjamin P. Frosse, P.E.
 Engineer

NOTE FROM EXPLORER PIPELINE

PRIOR TO GRADING OVER PIPELINE, CONTRACTOR SHALL CONTACT EXPLORER PIPELINE'S WOOD RIVER OFFICE AT 618.251.0262, ATTN: RICK THOMPSON.

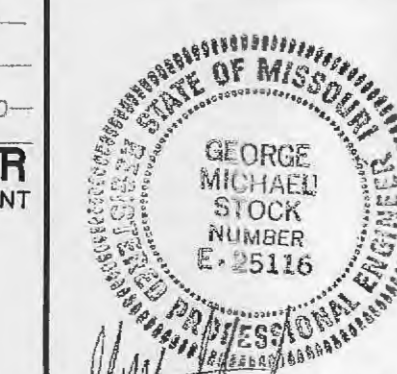
- 10/20/05 - REVISED PER REVIEW COMMENTS
- 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
- 9/27/05 - REVISED PER MODOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT

SITE AND GRADING PLAN

STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
 St. Louis, MO 63005
 PH. (636) 530-9100
 FAX (636) 530-9130
 e-mail: general@stockassoc.com
 Web: www.stockassoc.com



10/20/05
 GEORGE M. STOCK E-25116

DRAWN BY: T.P.S. DATE: 08/22/05 CHECKED BY: G.M.S. DATE: 8/22/05 JOB NUMBER: 204-3319 SHEET: C4.0

PROGRESS POINT
 BOOK 38, PG. 310-313
 LOT C
 AREA
 989,947 SQ. FT.
 OR
 22.726 ACRES
 N/F
 MOUNTAIN FARM, L.L.C.
 D.B. 2393, PG. 1456
 ZONED HTCD

PROPOSED BUILDING NO. 1
 37,510 Sq. Ft. ±
 F.F.=580.75±
 (BUILDING HEIGHT 30' ±)
 292 TOTAL PARKING STALL

FUTURE DEVELOPMENT

PROPOSED RETENTION
 NORMAL POOL ELEV. = 560.50 ±

OLD HIGHWAY 94
 (PUBLIC - VARIABLE WIDTH) ASPHALT PAVEMENT

MISSOURI STATE RTE 40TR
 (U.S. ROUTE 40-61) (I-64)
 (VARIABLE WIDTH)

MISSOURI STATE HIGHWAY 40TR
 ASPHALT PAVEMENT

N/F
 CHAPMAN VENTURES, L.L.C.
 DB. 4053, PG. 735
 ADDRESS: 6350 OLD HWY 94 S
 ZONED OTC

N/F
 MISSOURI EDISON CO
 DB. 433, PG. 00237
 ZONED GC

N/F
 DEAN JACKSON REAL ESTATE INC
 DB. 673, PG. 161
 ADDRESS: 6344 Old Hwy 94 S
 ZONED OTC

N/F
 GRATTENDICK, RUTH C. AND
 MOEHLKAMP, MARI
 DB. 844, PG. 1656
 ZONED GC

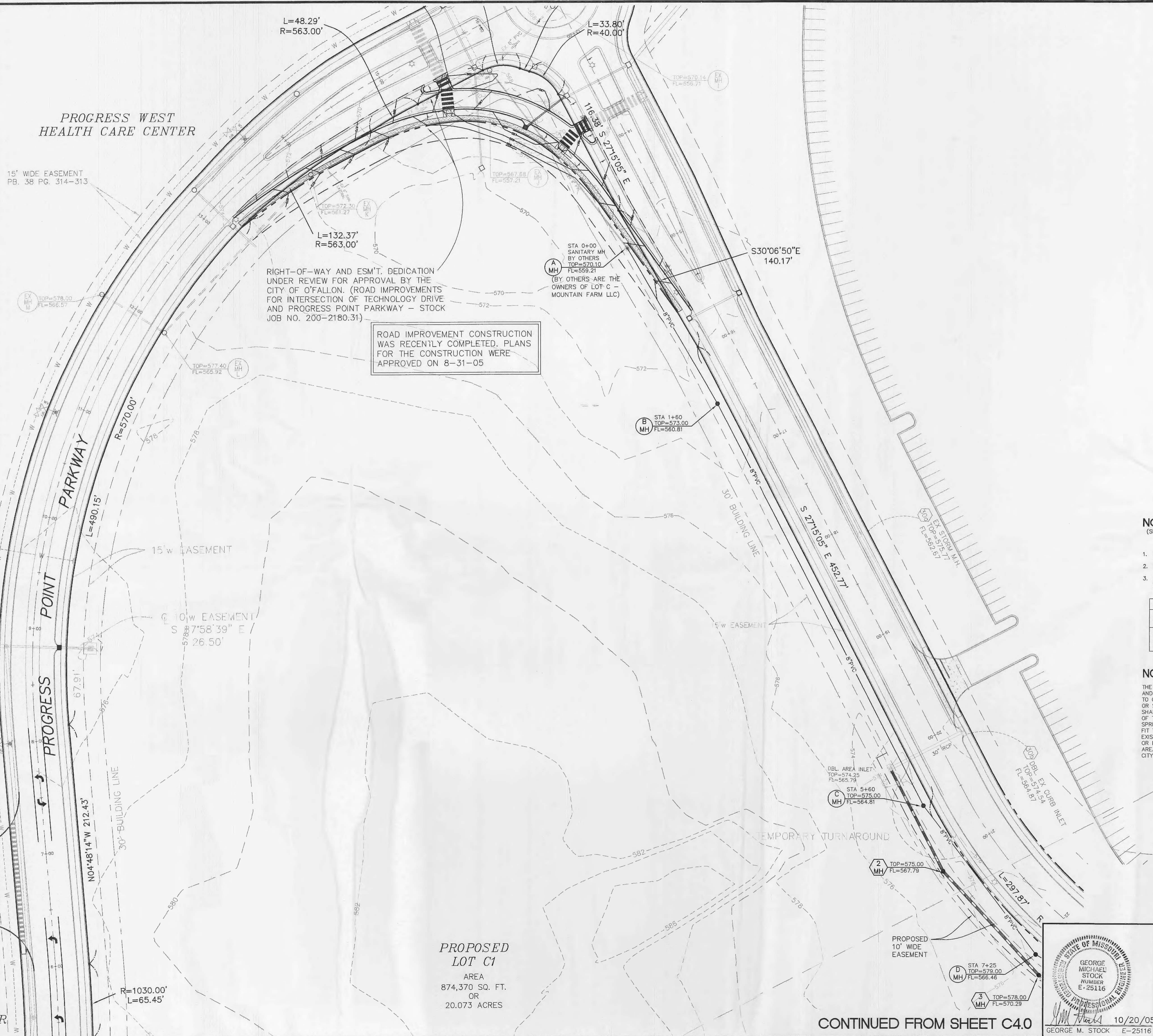
N/F
 OHAR WHITE & BARBARA WESTERMAN
 DB. 1433, PG. 1113

N/F
 TECHNOLOGY DRIVE, L.L.C.
 DB. 3745, PG. 774
 ADDRESS: 6345 OLD HWY. 94 S.

N/F
 ROBERT AND JOANN HAMMEL
 DB. 419, PG. 369
 ZONED GC
 (GENERAL COMMERCIAL)

PROGRESS WEST
HEALTH CARE CENTER

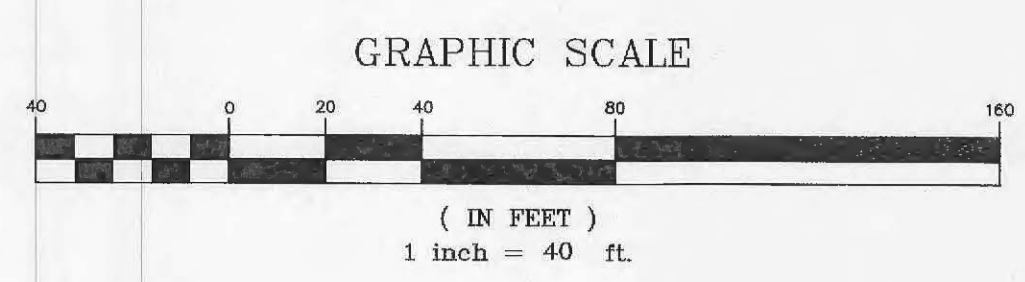
15' WIDE EASEMENT
PB. 38 PG. 314-313



RIGHT-OF-WAY AND ESM'T. DEDICATION UNDER REVIEW FOR APPROVAL BY THE CITY OF O'FALLON. (ROAD IMPROVEMENTS FOR INTERSECTION OF TECHNOLOGY DRIVE AND PROGRESS POINT PARKWAY - STOCK JOB NO. 200-2180.31)

ROAD IMPROVEMENT CONSTRUCTION WAS RECENTLY COMPLETED. PLANS FOR THE CONSTRUCTION WERE APPROVED ON 8-31-05

PROPOSED
LOT C1
AREA
874,370 SQ. FT.
OR
20.073 ACRES



NOTES PER CITY OF O'FALLON
(SEE SHEET C2.0 FOR ADDITIONAL STORM SEWER NOTES)

- NOTE THAT ALL SEWER PIPE JOINTS SHALL BE GASKETED O-RING TYPE.
- PROVIDE GRANULAR BACKFILL WITHIN THE 1:1 SHEAR PLAN OF THE PAVEMENT.
- PROVIDE A MARKING ON THE STORM SEWER INLETS. THE CITY OF O'FALLON WILL ALLOW THE FOLLOWING MARKERS AND ADHESIVE PROCEDURES ONLY AS SHOWN IN THE TABLE BELOW. "PEEL AND STICK" ADHESIVE PADS WILL NOT BE ALLOWED.

MANUFACTURER	SIZE	ADHESIVE	STYLE	MESSAGE (PART #)	WEBSITE
ACP INTERNATIONAL	3 7/8"	EPOXY	CRYSTAL CAP	NO DUMPING DRAINS TO WATERWAYS (SD-W-CC)	www.acpinternational.com
DAS MANUFACTURING, INC.	4"	EPOXY	STANDARD STYLE	NO DUMPING DRAINS TO STREAM (#SDS)	www.dasmanufacturing.com

NOTE TO CONTRACTOR:

THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON AND/OR THE CITY OF WELDON SPRING AND/OR MODOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON AND/OR CITY OF WELDON SPRING AND/OR MODOT.

- 10/20/05 - REVISED PER REVIEW COMMENTS
- 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
- 9/27/05 - REVISED PER MODOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT
SITE AND GRADING PLAN

STOCK & ASSOCIATES
Consulting Engineers, Inc.

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St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

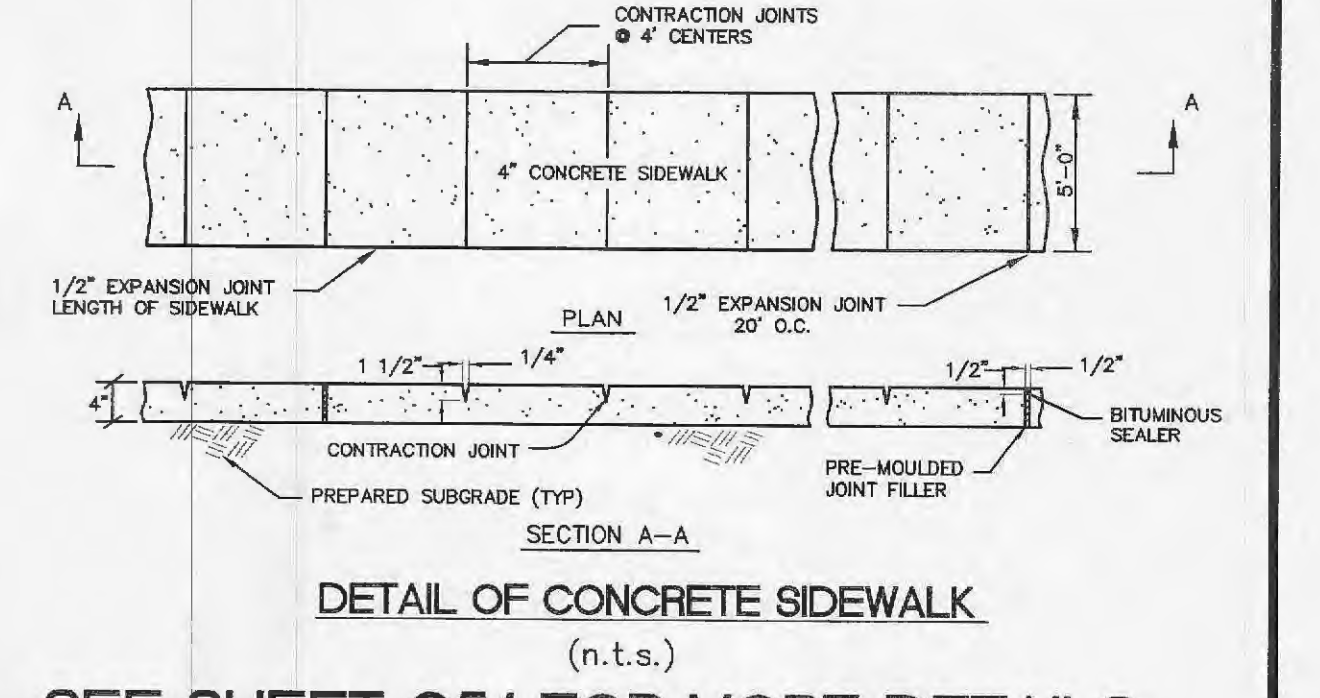
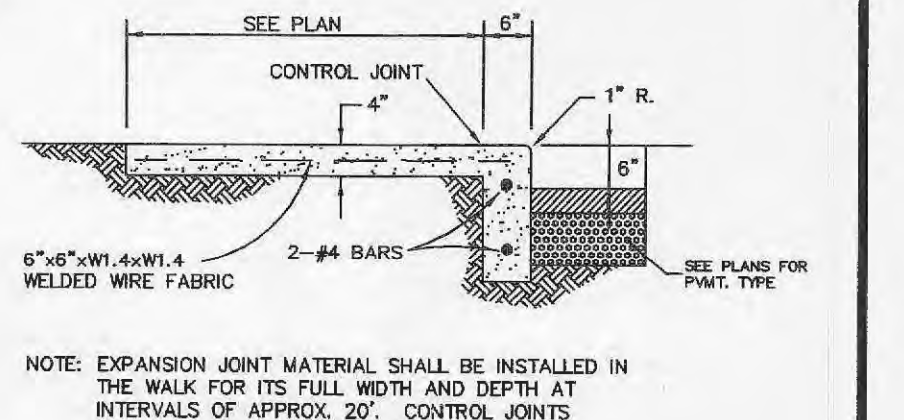
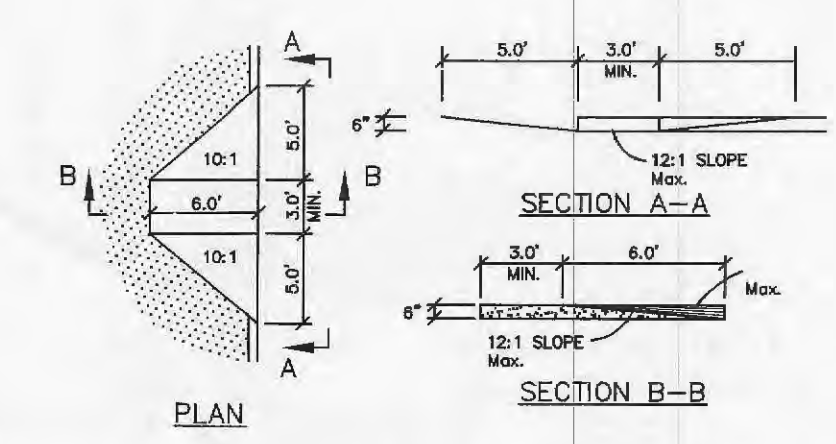
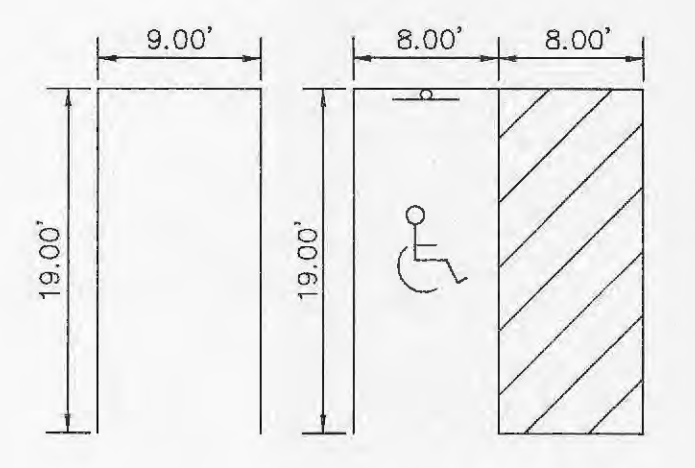
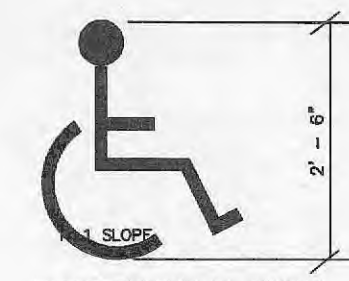
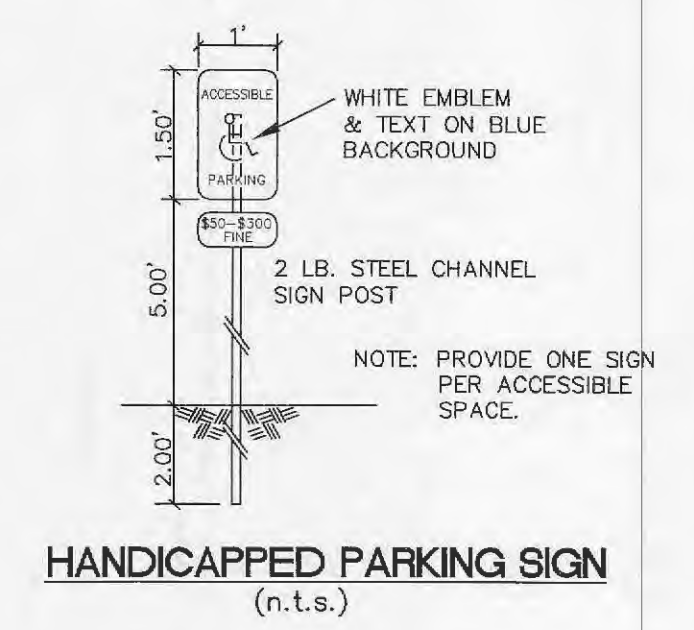
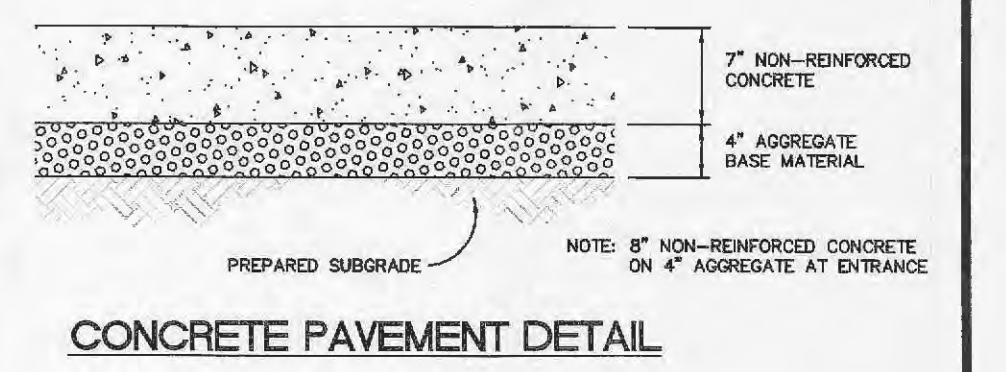
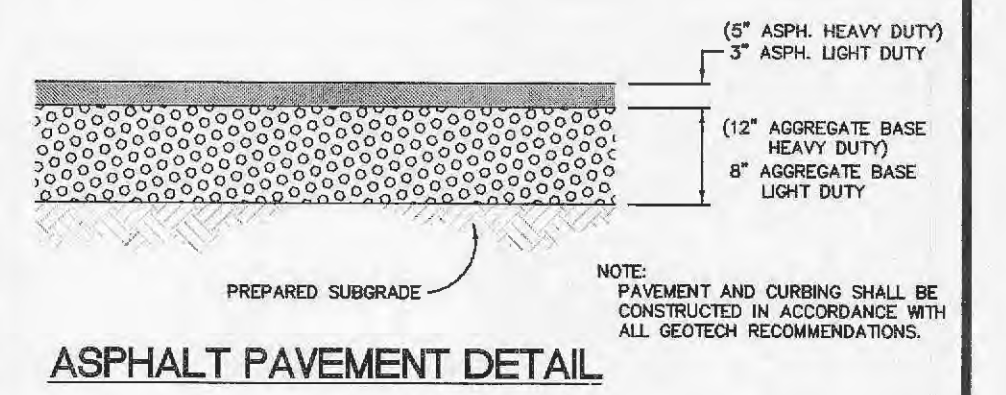
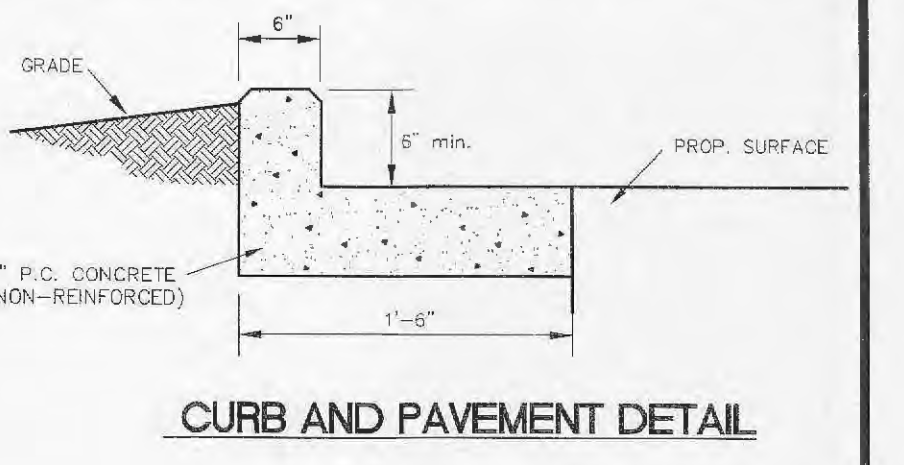
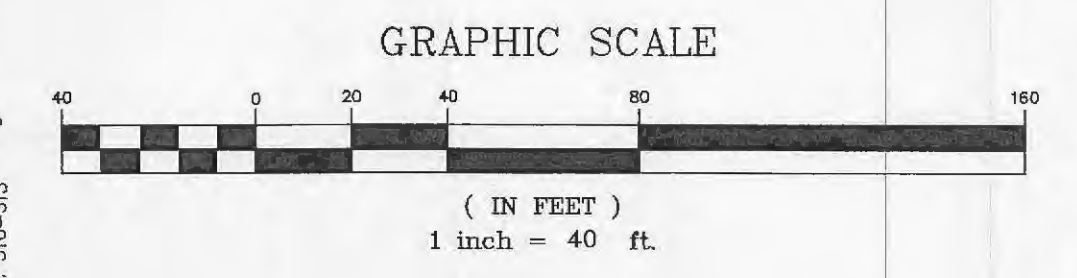
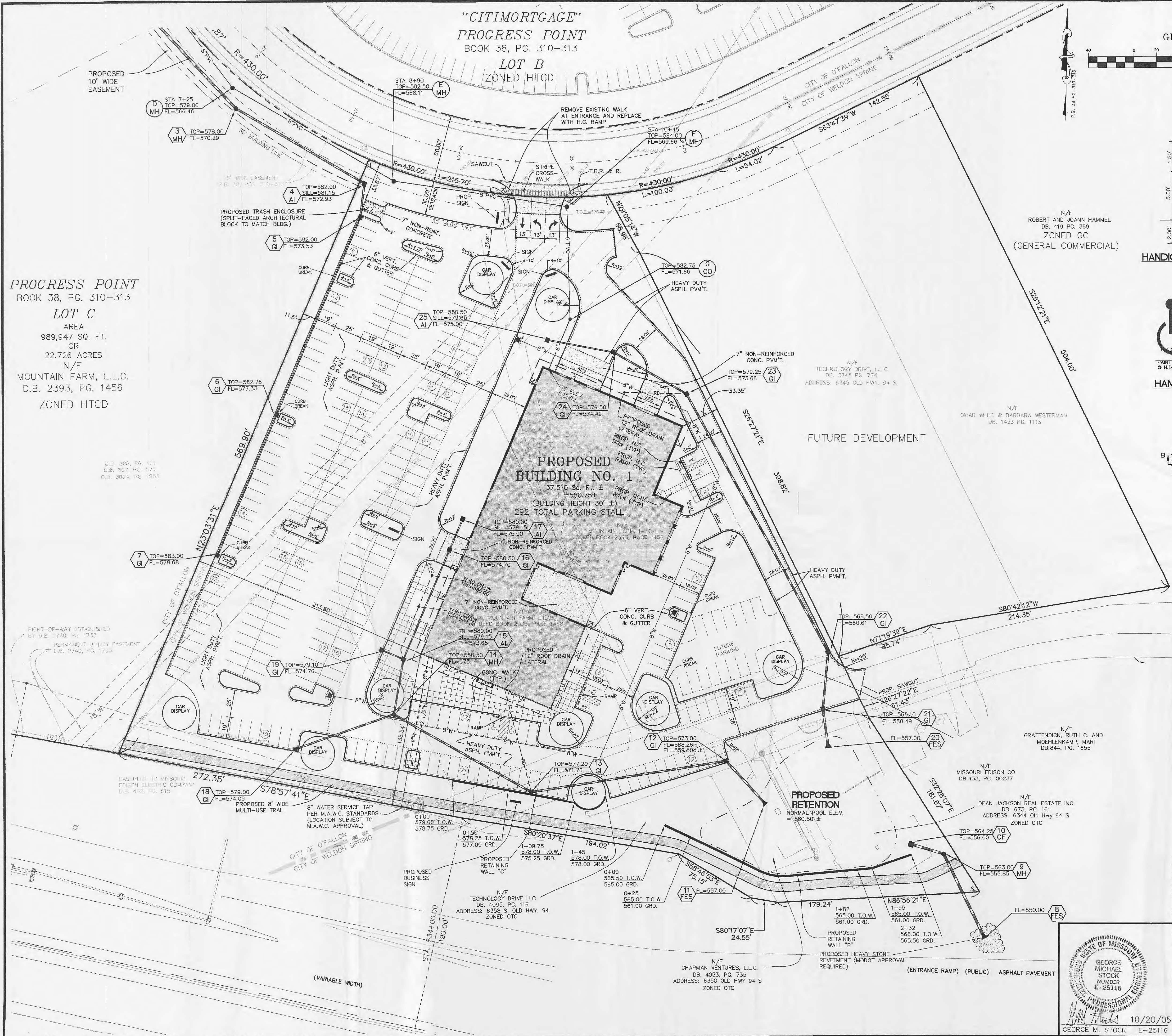


CONTINUED FROM SHEET C4.0

"CITIMORTGAGE"
 PROGRESS POINT
 BOOK 38, PG. 310-313

LOT B
 ZONED HTCD

PROGRESS POINT
 BOOK 38, PG. 310-313
 LOT C
 AREA
 989,947 SQ. FT.
 OR
 22.726 ACRES
 N/F
 MOUNTAIN FARM, L.L.C.
 D.B. 2393, PG. 1456
 ZONED HTCD

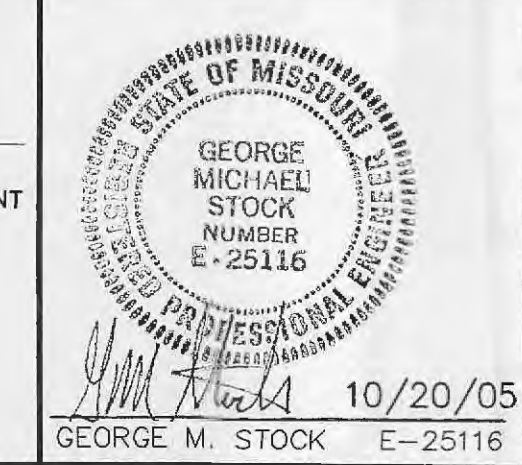


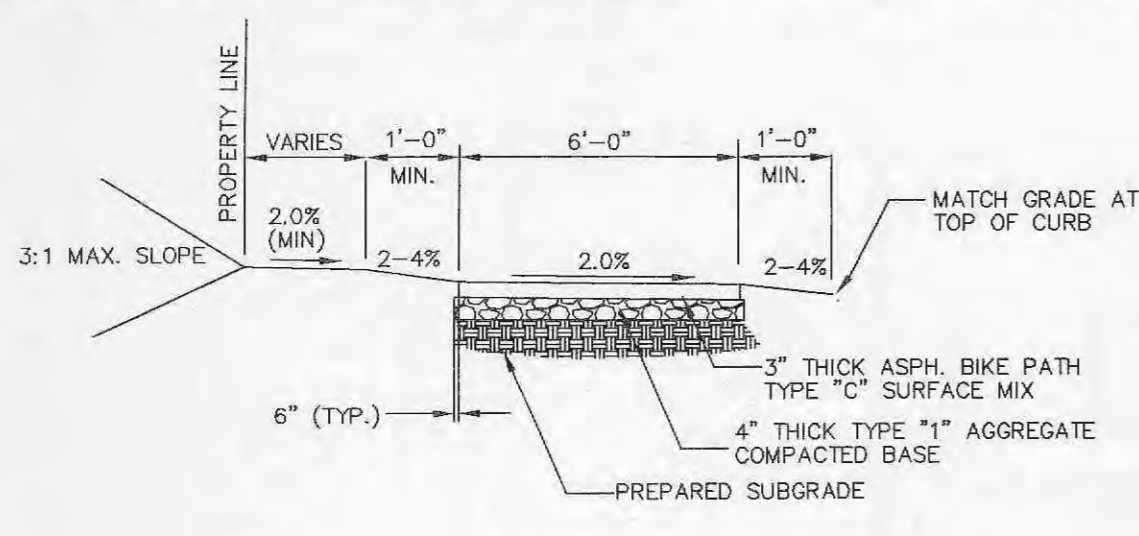
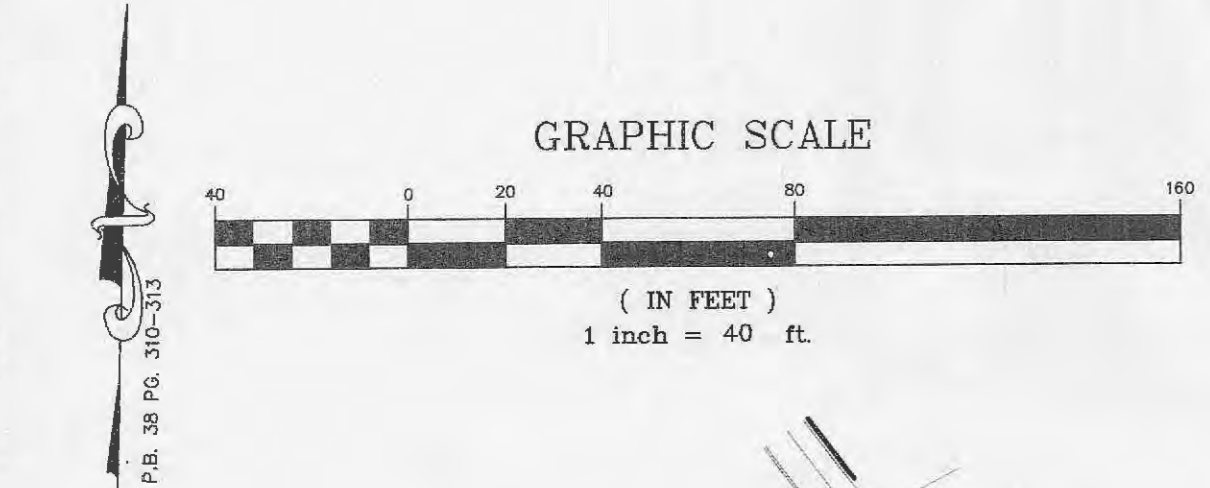
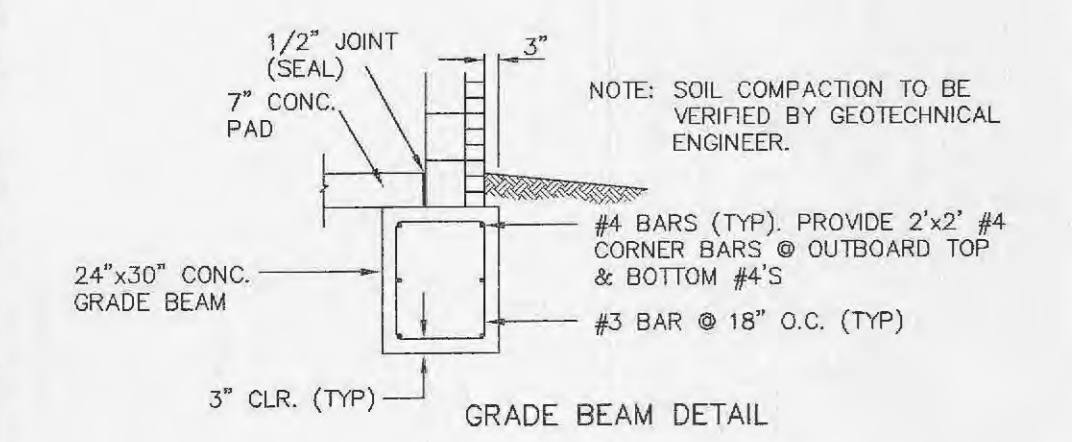
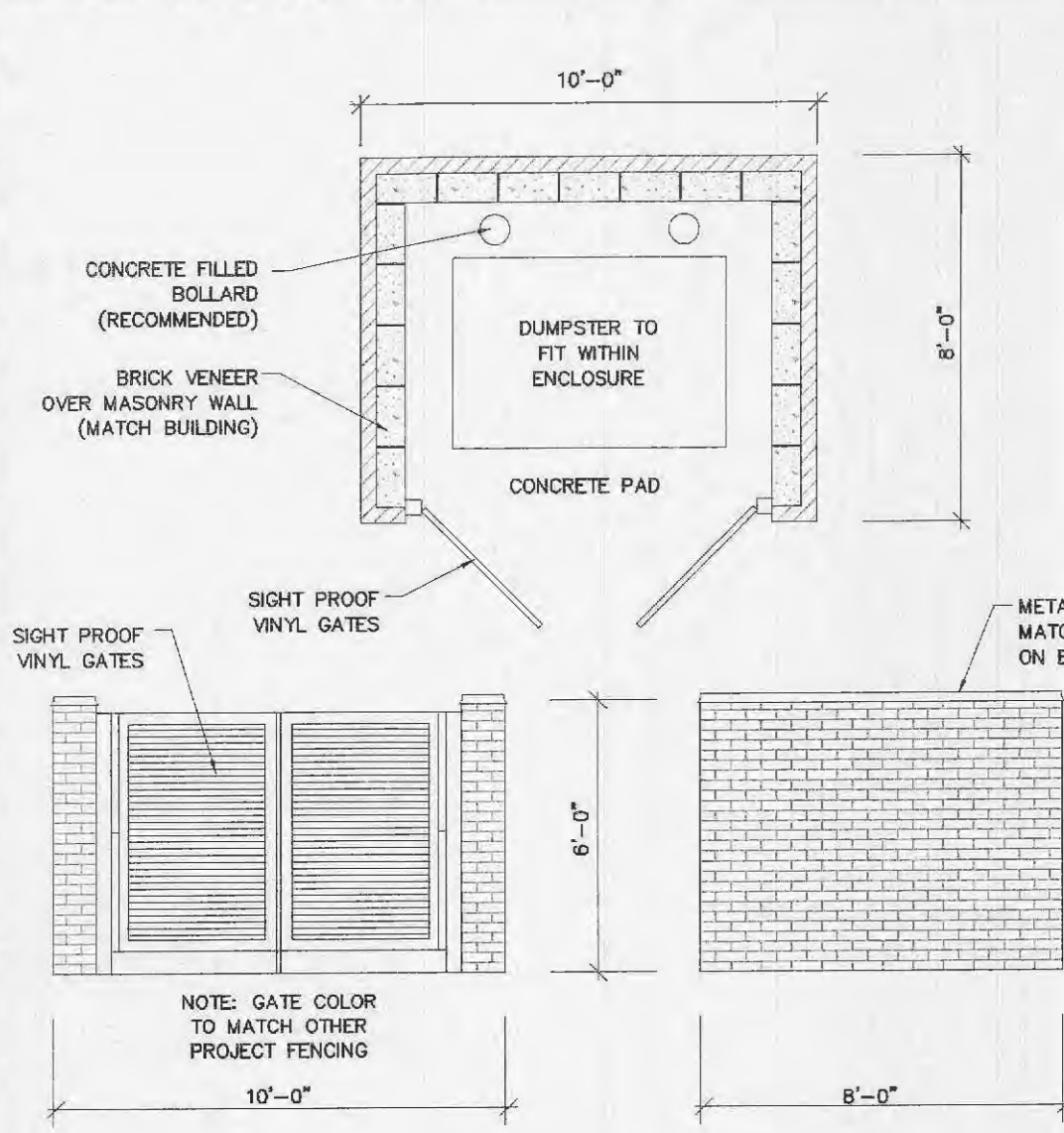
SEE SHEET C5.1 FOR MORE DETAILS

- ▲ 10/20/05 - REVISED PER REVIEW COMMENTS
- ▲ 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
- ▲ 9/27/05 - REVISED PER MODOT COMMENTS

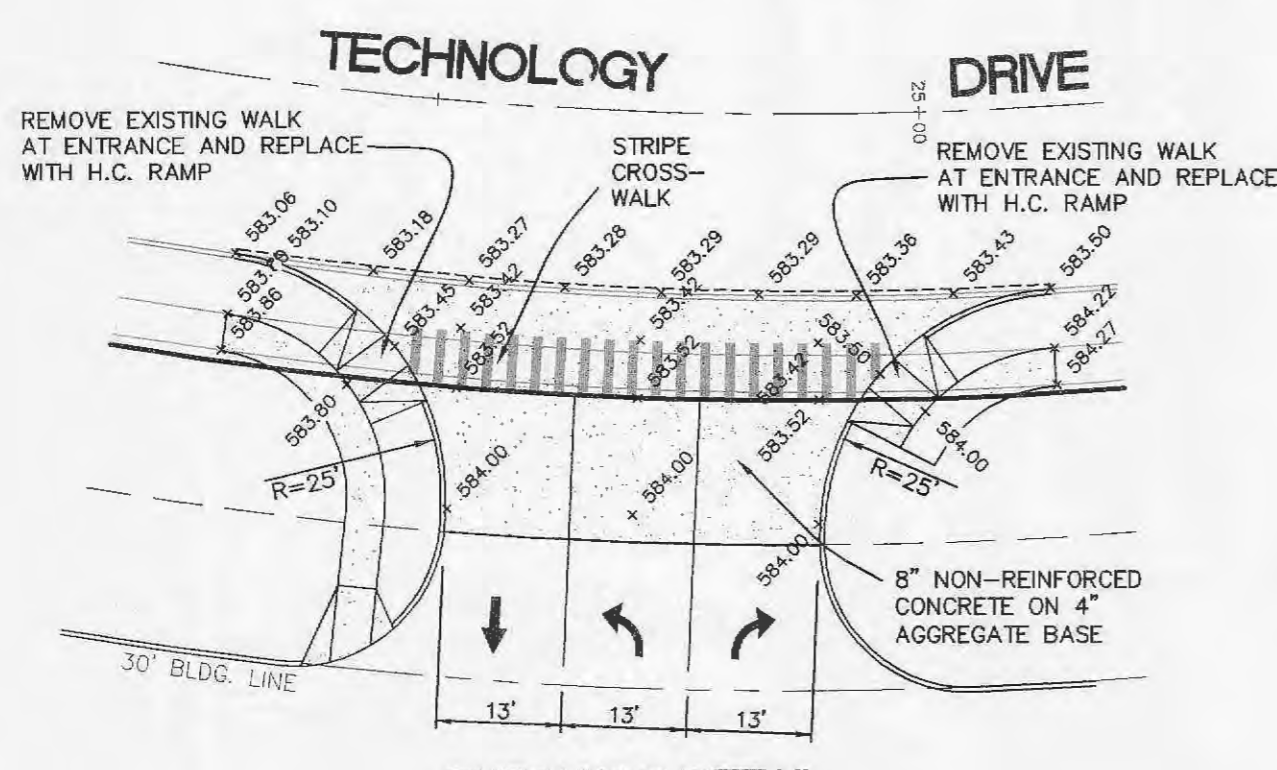
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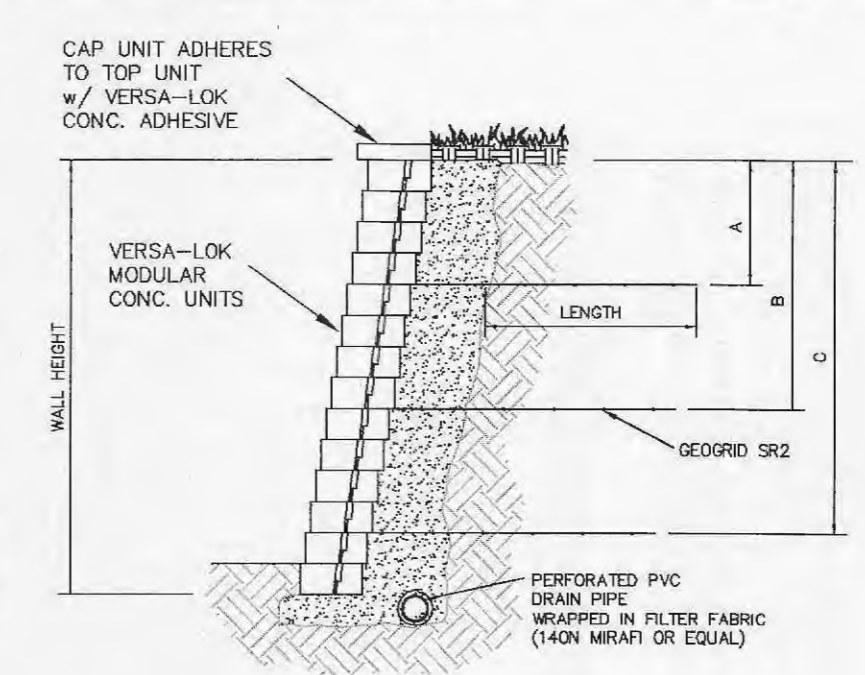
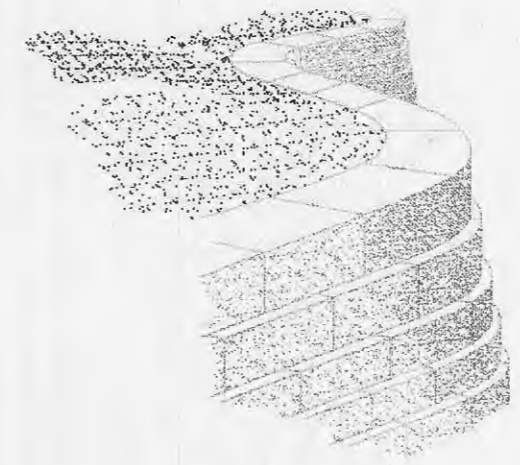
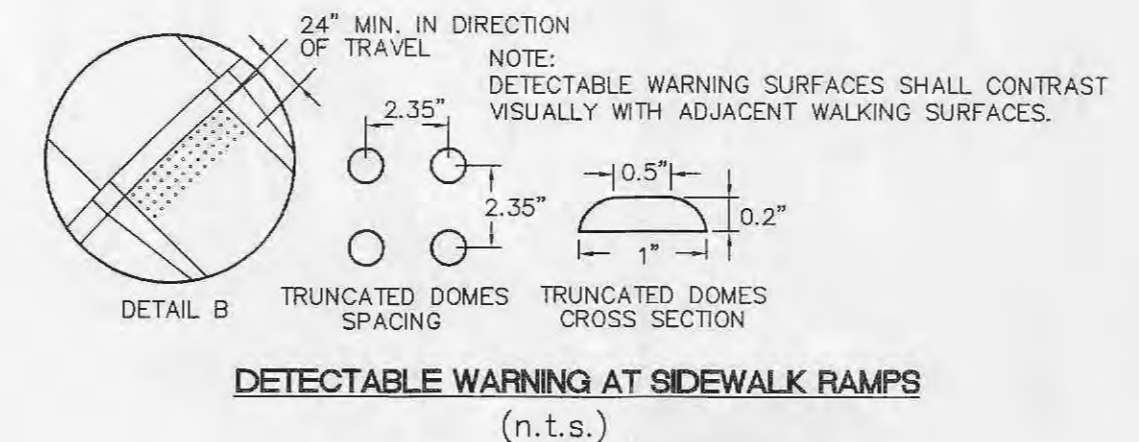




NOTES:
PROVIDE CONCRETE HANDICAP RAMP WHERE TRAIL INTERSECTS ACCESS DRIVES OR STREETS OR WHERE TRAIL INTERSECTS WITH CURBING (SEE PLAN).
PROVIDE STRIPING OR A COLORED TEXTURED PAVEMENT THROUGH THE ACCESS DRIVES OR STREETS INTO THE DEVELOPMENT.
MAXIMUM SLOPE OF THE PATH SHALL NOT EXCEED 8% AND 2% CROSS SLOPE PER CITY OF OFALLON SPECIFICATIONS.
THE TRAIL SHALL BE CONSTRUCTED WITH A CONSISTENT SLOPE WITH VERTICAL CURVES A MINIMUM OF 50' IN LENGTH. AFTER FINAL COMPRESSION, THE SURFACE SHALL BE SMOOTH AND TRUE TO THE ESTABLISHED CROWN AND GRADE. ANY LOW OR DEFECTIVE PLACES SHALL IMMEDIATELY BE REMEDIED BY CUTTING OUT THE COURSE AT SUCH SPOTS AND REPLACING IT WITH FRESH HOT MIXTURE, WHICH SHALL BE IMMEDIATELY COMPACTED TO CONFORM WITH THE SURROUNDING AREA AND SHALL BE THOROUGHLY BONDED TO IT. THE FINISHED PAVEMENT SHALL BE SET FREE FROM DEPRESSIONS EXCEEDING ONE-EIGHTH INCH AS MEASURED WITH A TEN-FOOT STRAIGHT EDGE PARALLELING THE CENTERLINE OF THE TRAIL.



- ENTRANCE NOTES (PER O'FALLON):**
- ENTRANCE GRADES SHALL NOT EXCEED 2% AT WALKS, 4% FROM STREET AND 10% OVERALL. TYPICALLY 2% FROM BACK OF CURB THROUGH THE RIGHT OF WAY IS DESIRED.
 - AT THE PROPOSED ENTRANCE, THE SAWCUT ON THE CURBING SHALL BE AT THE NEAREST JOINT AND THE ENTRANCE JOINTING SHALL MATCH EXISTING JOINTING ON TECHNOLOGY DRIVE.
 - HANDICAP RAMP IS TO HAVE TRUNCATED DOMES AND BE TINTED RED CONCRETE.



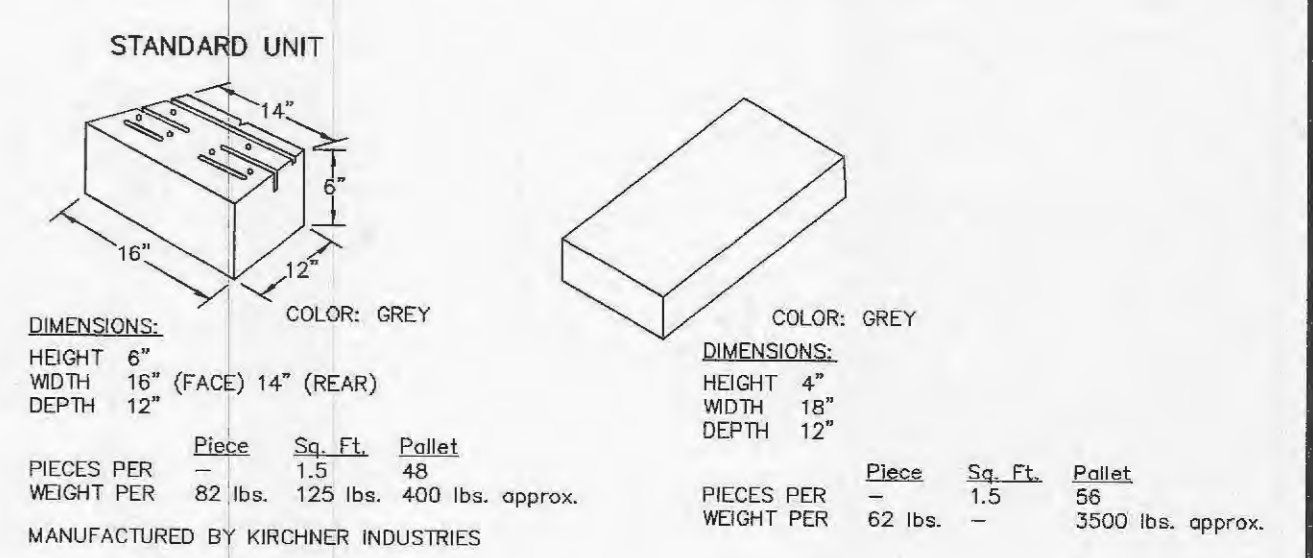
WALL HEIGHT OF GRID	LENGTH	DIMENSION	A	B	C
5	3.50'	3.0'	1.5'	1.5'	1.5'
6	3.50'	3.0'	1.5'	1.5'	1.5'
7	4.00'	3.0'	1.5'	1.5'	1.5'
8	4.50'	3.0'	1.5'	1.5'	1.5'
9	5.00'	3.0'	1.5'	1.5'	1.5'
10	5.50'	3.0'	1.5'	1.5'	1.5'
11	6.00'	3.0'	1.5'	1.5'	1.5'

SEE NOTE #

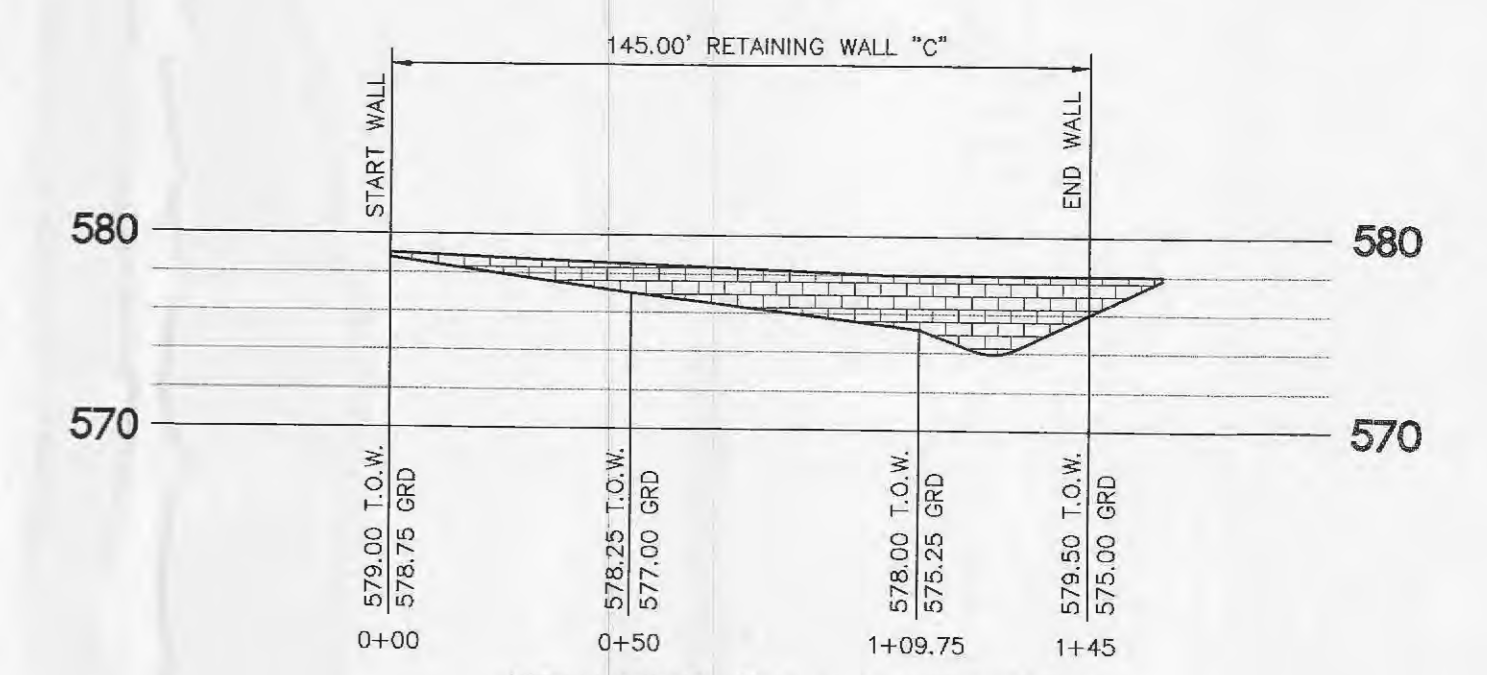
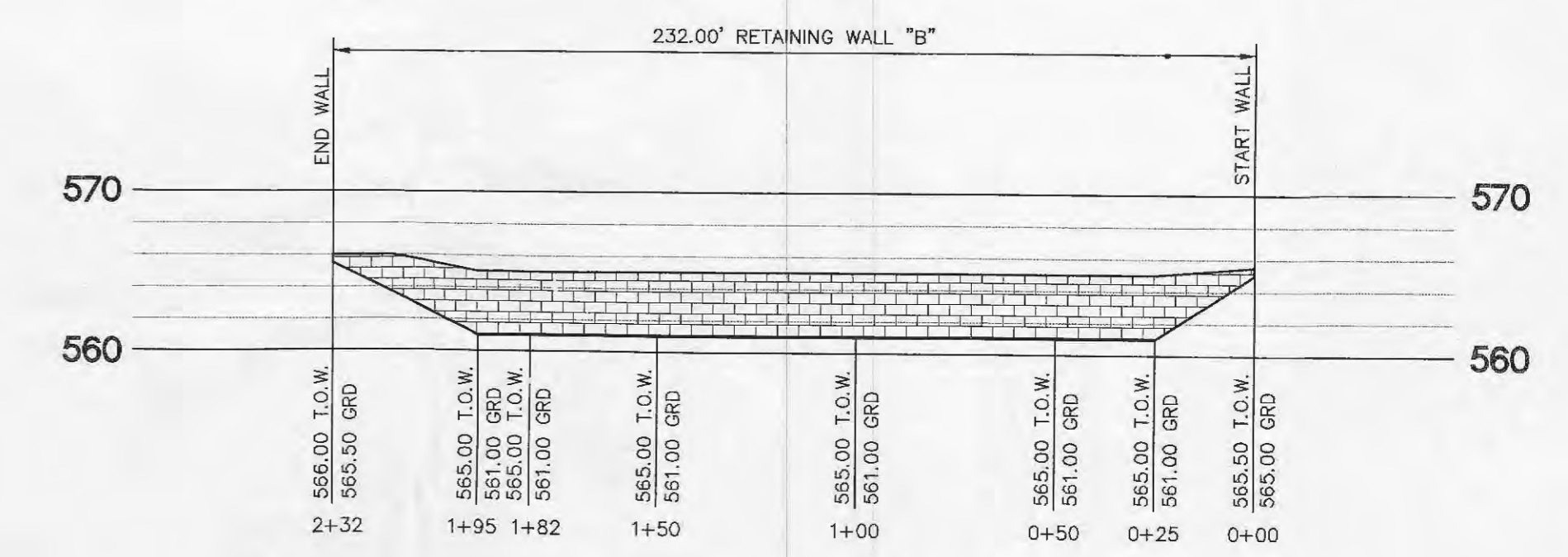
VERSA-LOK RETAINING WALL TYPICAL SECTION

- NOTES:
- ALL CONSTRUCTION SHALL BE PER THE MANUFACTURERS RECOMMENDATION.
 - SHOP DRAWINGS BEARING THE SEAL OF A REGISTERED ENGINEER IN THE STATE OF MISSOURI TO BE SUPPLIED TO THIS ENGINEER FOR APPROVAL.
 - ACCEPTED ALTERNATE WALL SYSTEM: KEYSTONE OR ROCKWOOD
 - TW= TOP OF RETAINING WALL, BW= GRADE AT BASE OF WALL
 - FOUNDATION STABILITY AND GLOBAL STABILITY SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER.

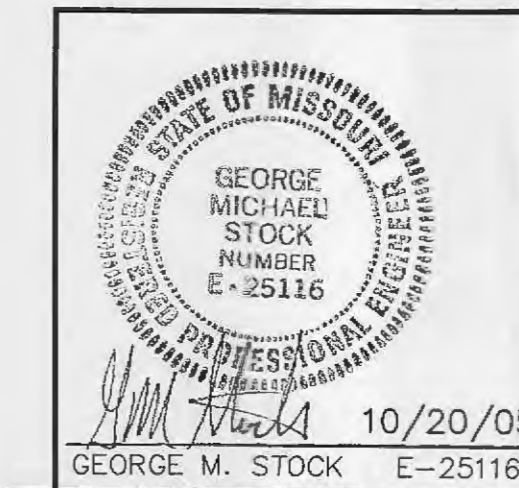
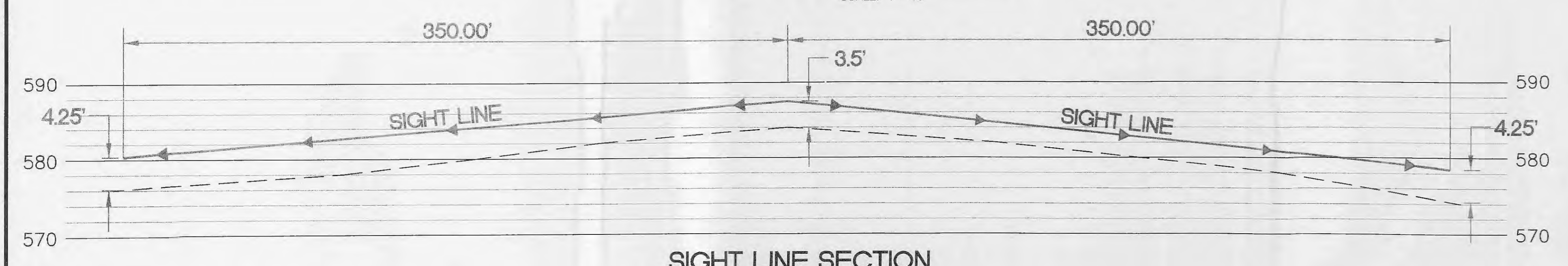
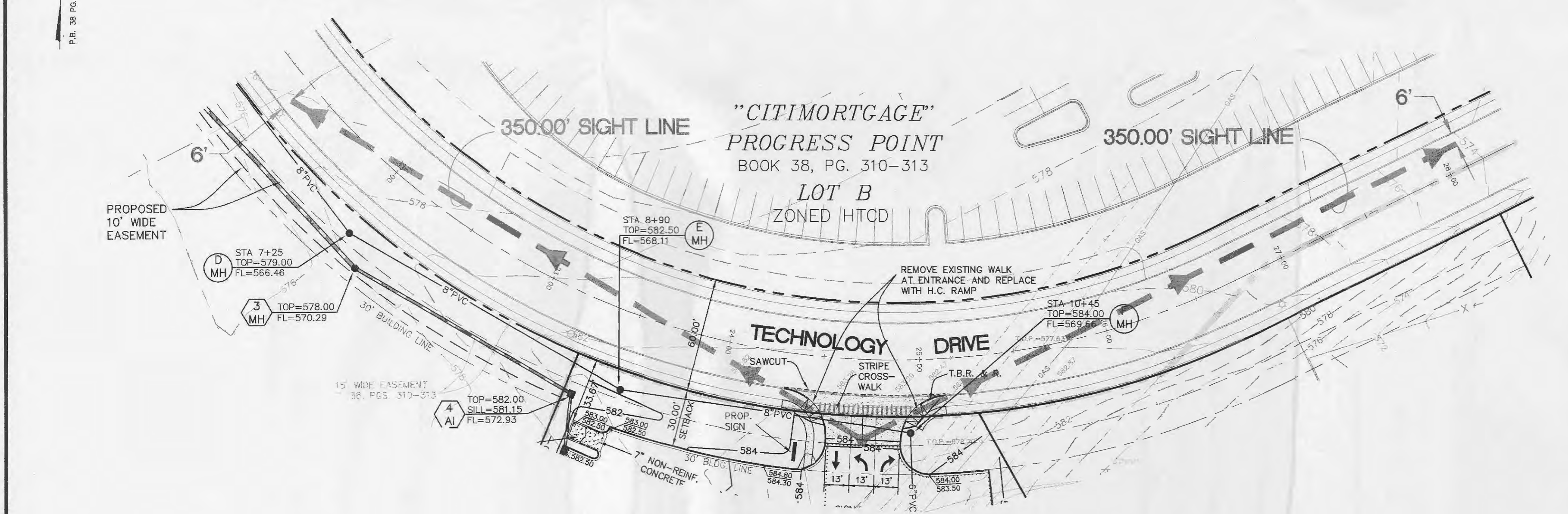
NOTE #1
THE ABOVE INFORMATION IS A CONCEPT ONLY. ACTUAL DESIGN OF RETAINING WALL SHALL BE BY A LICENSED PROFESSIONAL ENGINEER & SUBMITTED TO STOCK AND ASSOCIATES FOR GENERAL COMPLIANCE w/ GRADING PLAN.



NOTE: A FENCE OR OTHER IMPERVIOUS BARRIER IS REQUIRED ON THE TOP OF ALL RETAINING WALLS WHERE THERE IS A DIFFERENCE IN GRADE LEVEL ON EITHER SIDE OF THE WALL OF 4 FEET OR AT THE TOP OF THE UPPER WALL FOR STAIR STEPPED WALLS.
A BUILDING PERMIT WILL BE REQUIRED FOR ALL RETAINING WALLS.



- 10/20/05 - REVISED PER REVIEW COMMENTS
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- 9/27/05 - REVISED PER MDOT COMMENTS

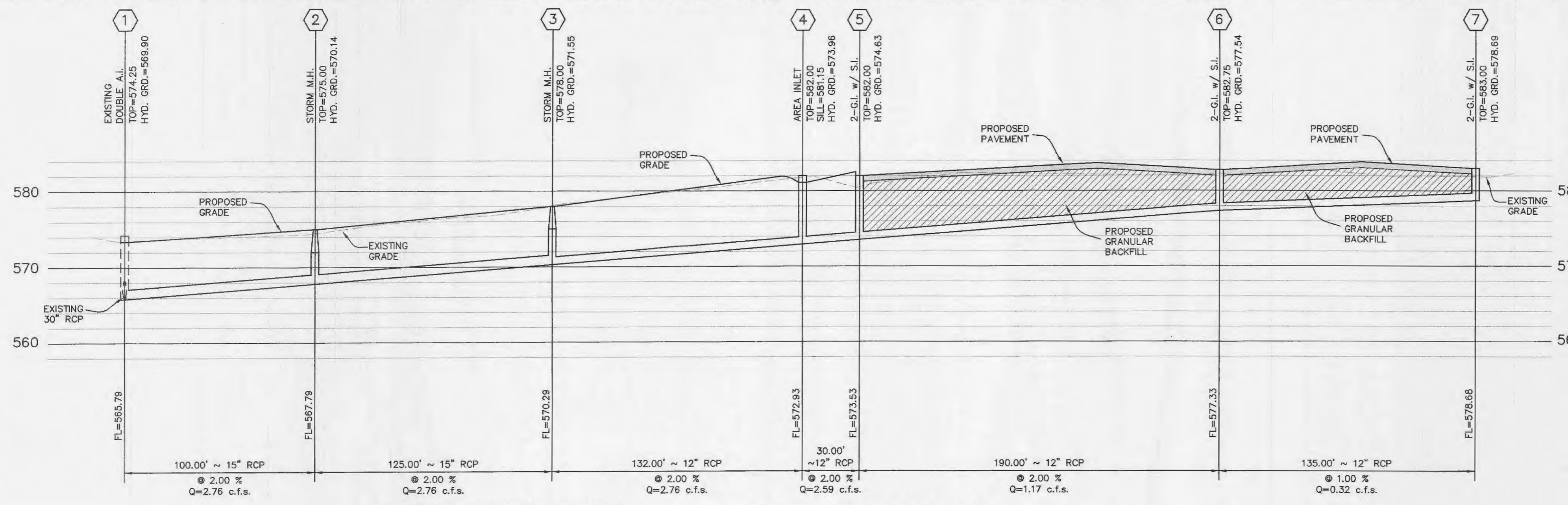


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SITE GEOMETRICS AND DETAILS

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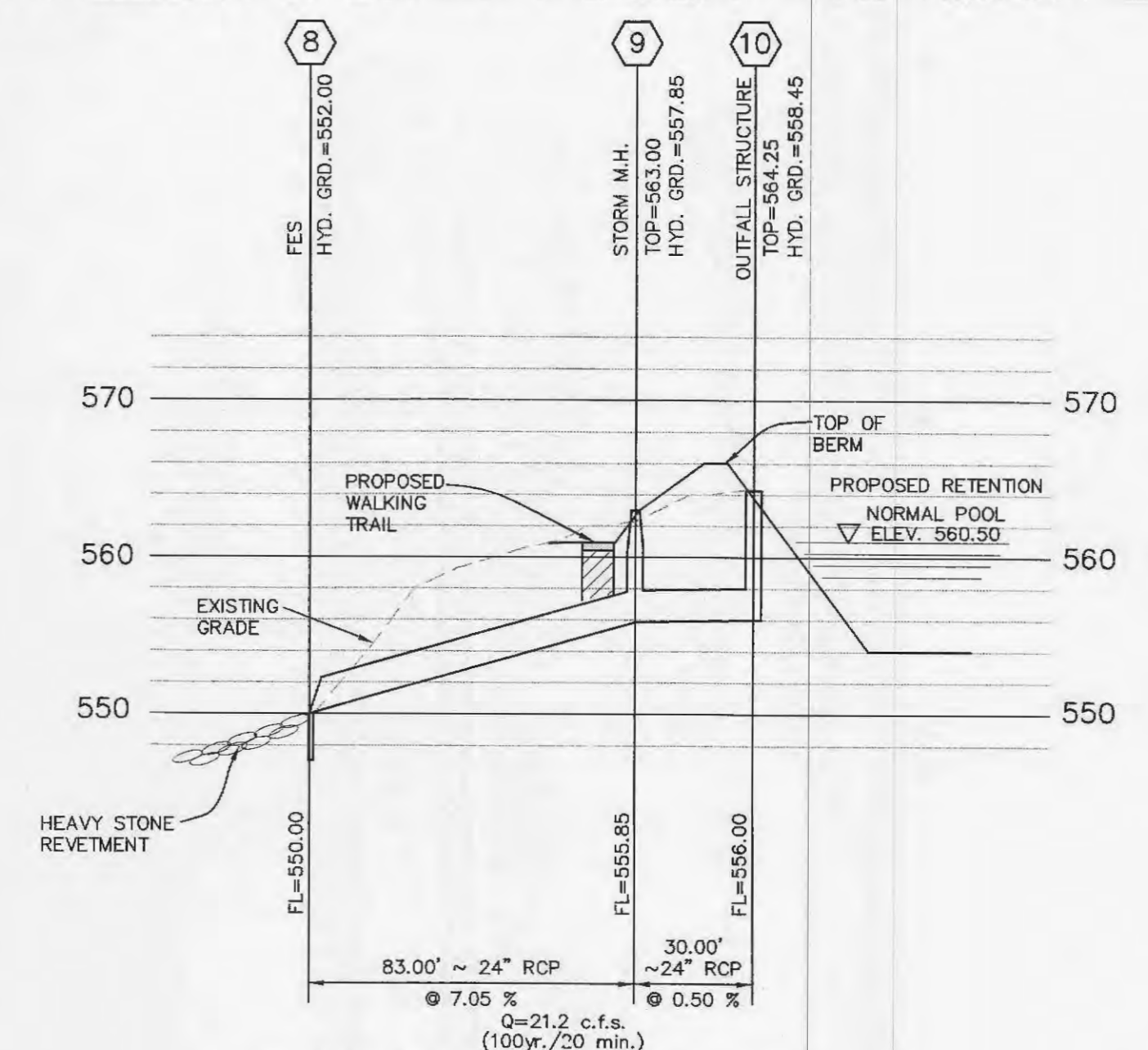
10/20/05
DRAWN BY: T.P.S. 08/22/05
CHECKED BY: G.M.S. 8/22/05
DATE: 10/20/05
JOB NUMBER: 204-3319
SHEET: C5.1



NOTE: PROVIDE GRANULAR BACKFILL WITHIN THE 1:1 SHEAR PLAN OF THE PAVEMENT ALONG TECHNOLOGY DRIVE.

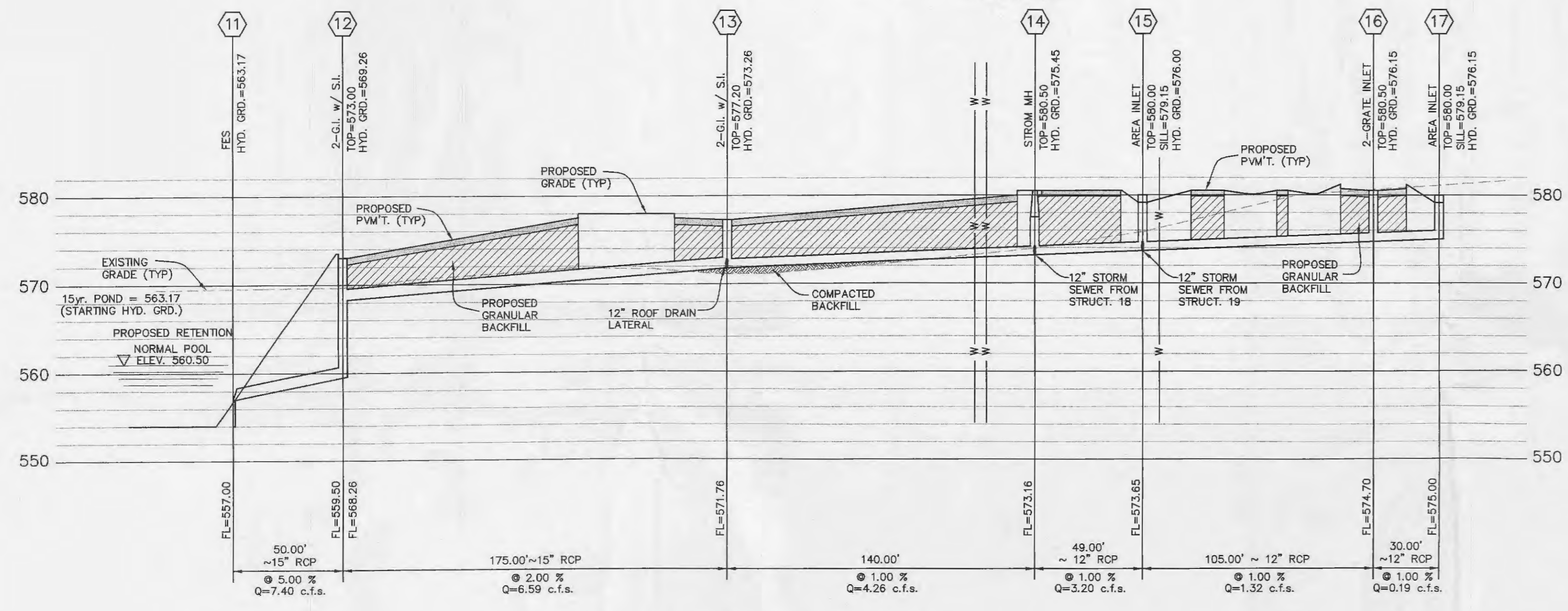
STORM SEWER PROFILE

SCALE: 1"=40' HORIZONTAL
1"=10' VERTICAL



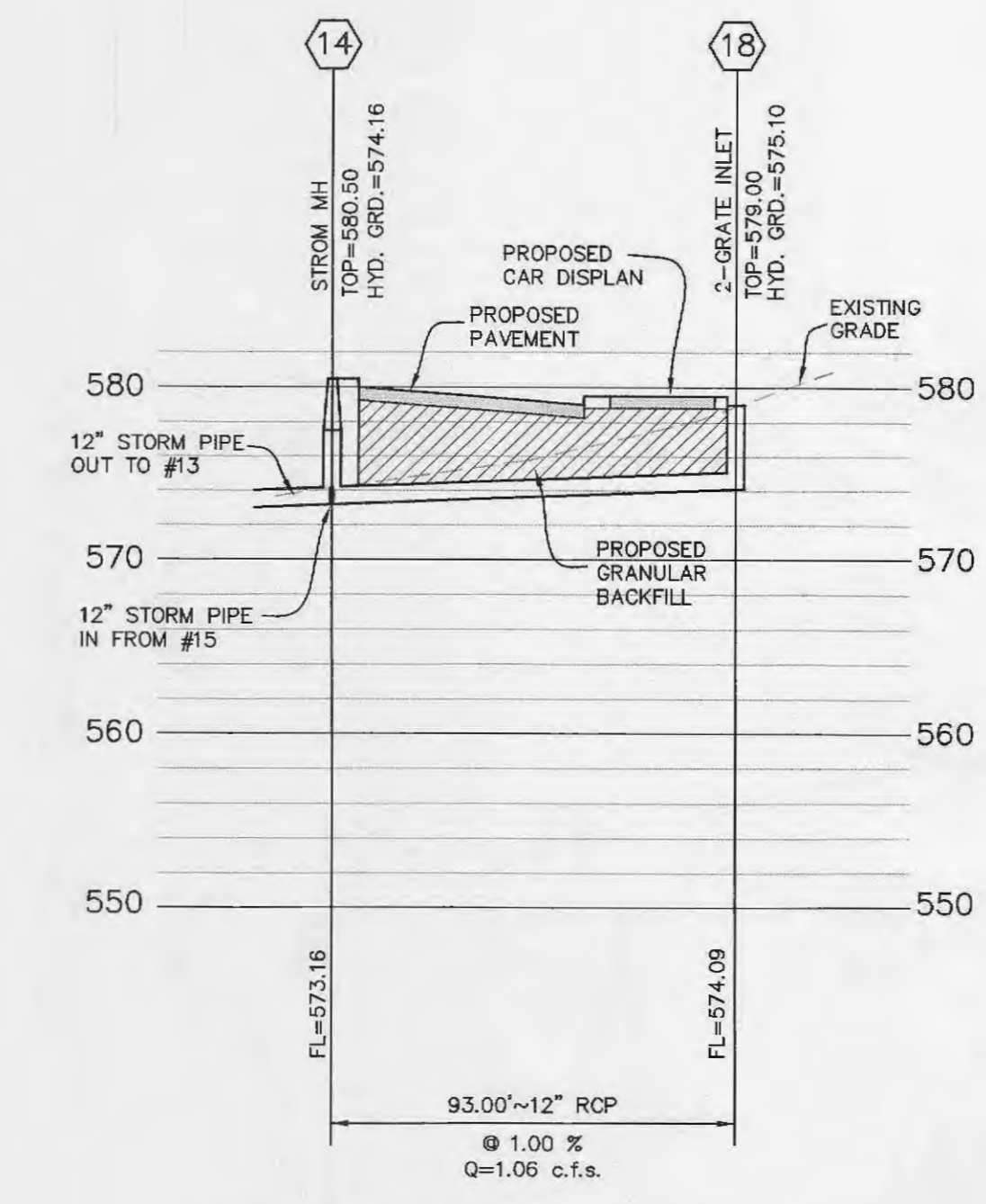
STORM SEWER PROFILE

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1"=10' VERTICAL



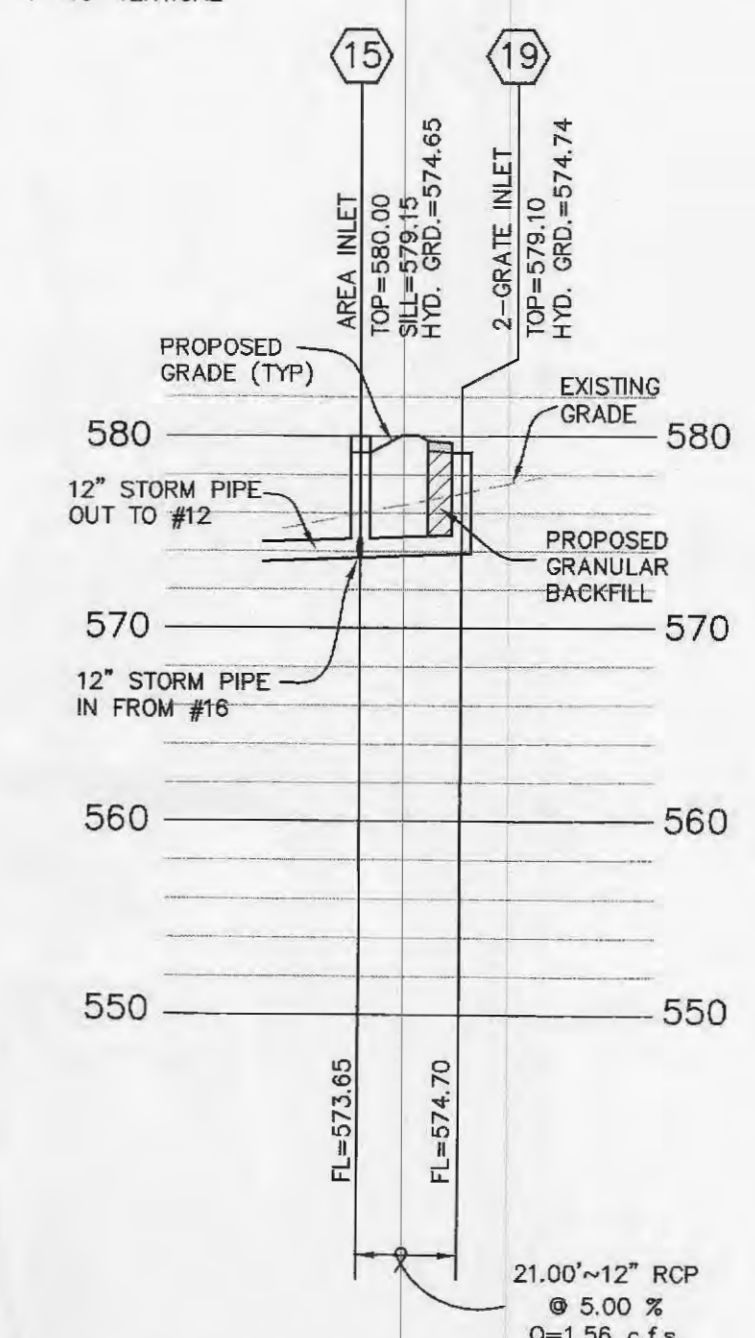
STORM SEWER PROFILE

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1"=10' VERTICAL



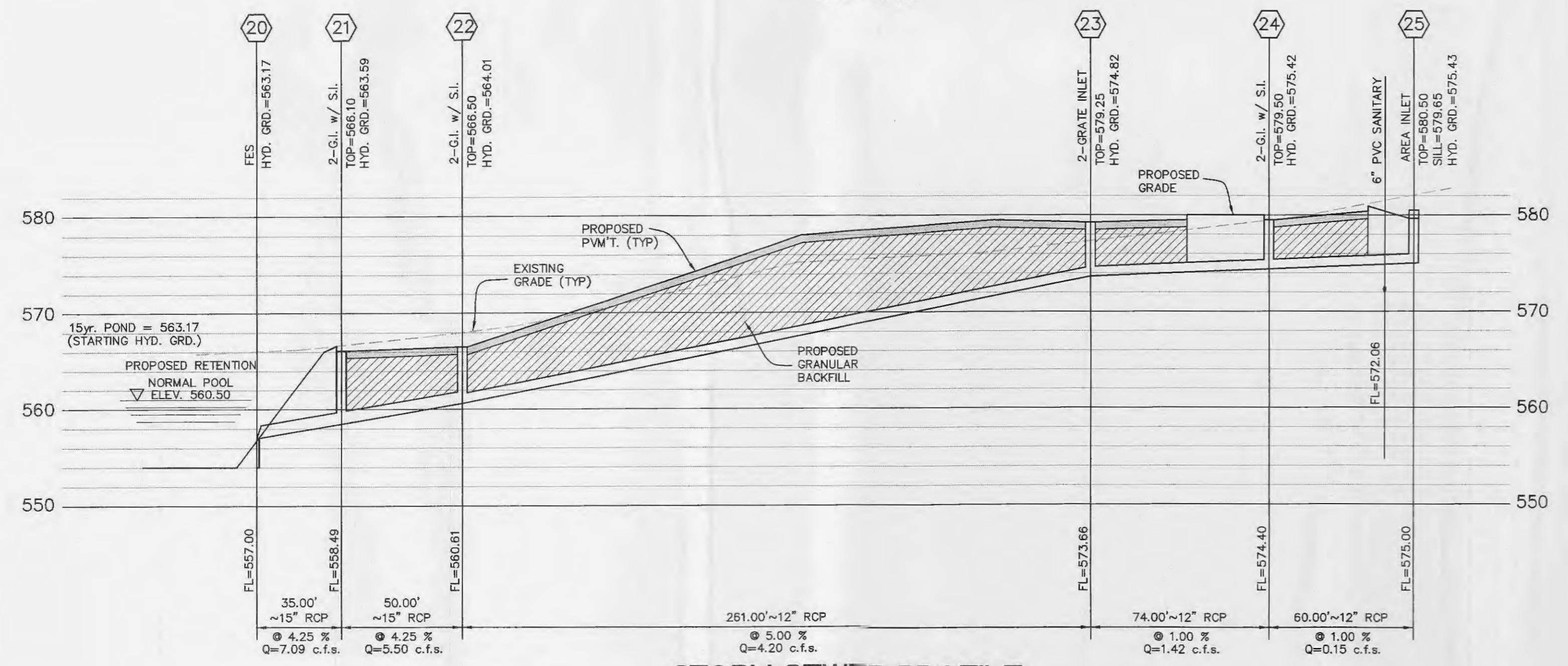
STORM SEWER PROFILE

SCALE: 1"=40' HORIZONTAL
1"=10' VERTICAL



STORM SEWER PROFILE

SCALE: 1"=40' HORIZONTAL
1"=10' VERTICAL



STORM SEWER PROFILE

SCALE: 1"=40' HORIZONTAL
1"=10' VERTICAL

NOTES PER CITY OF O'FALLON
(SEE SHEET C2.0 FOR ADDITIONAL STORM SEWER NOTES)

- NOTE THAT ALL SEWER PIPE JOINTS SHALL BE GASKETED O-RING TYPE.
- PROVIDE GRANULAR BACKFILL WITHIN THE 1:1 SHEAR PLAN OF THE PAVEMENT.
- PROVIDE A MARKING ON THE STORM SEWER INLETS. THE CITY OF O'FALLON WILL ALLOW THE FOLLOWING MARKERS AND ADHESIVE PROCEDURES ONLY AS SHOWN IN THE TABLE BELOW. "PEEL AND STICK" ADHESIVE PADS WILL NOT BE ALLOWED.

MANUFACTURER	SIZE	ADHESIVE	STYLE	MESSAGE (PART #)	WEBSITE
ACP INTERNATIONAL	3 7/8"	EPOXY	CRYSTAL CAP	NO DUMPING DRAINS TO WATERWAYS (SD-W-CC)	www.acpinternational.com
DAS MANUFACTURING, INC.	4"	EPOXY	STANDARD STYLE	NO DUMPING DRAINS TO STREAM (#SDS)	www.dasmanufacturing.com

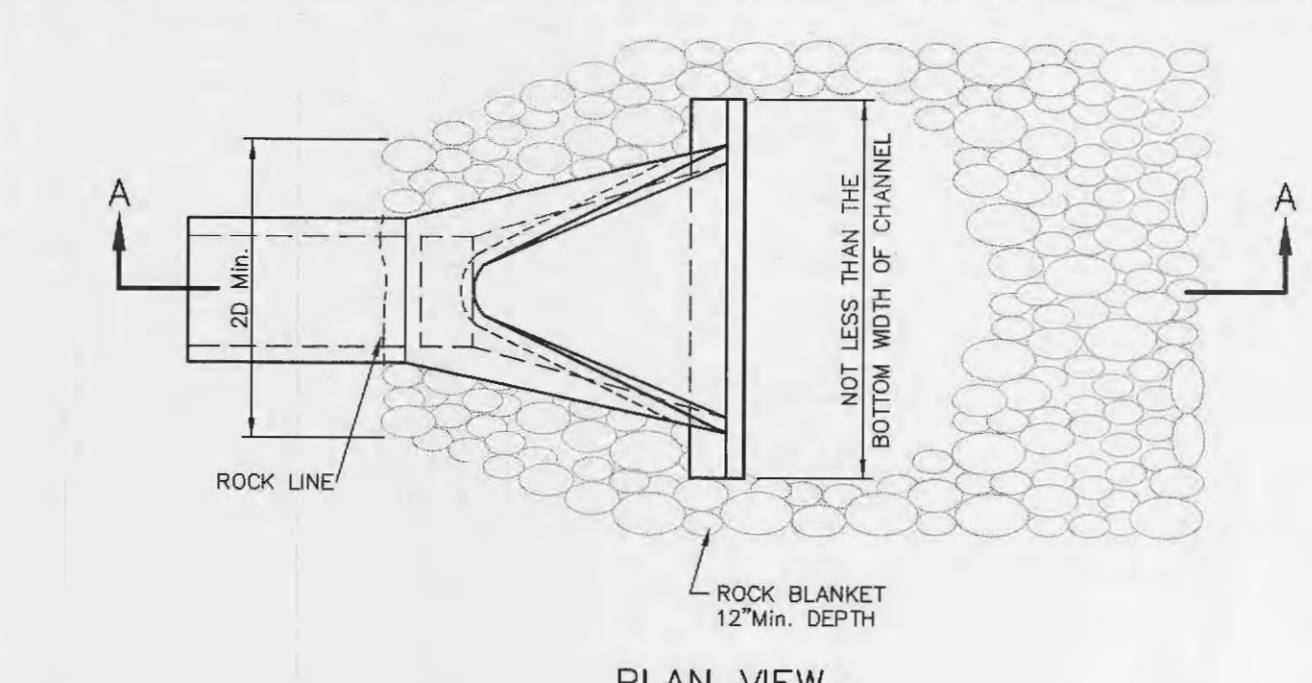
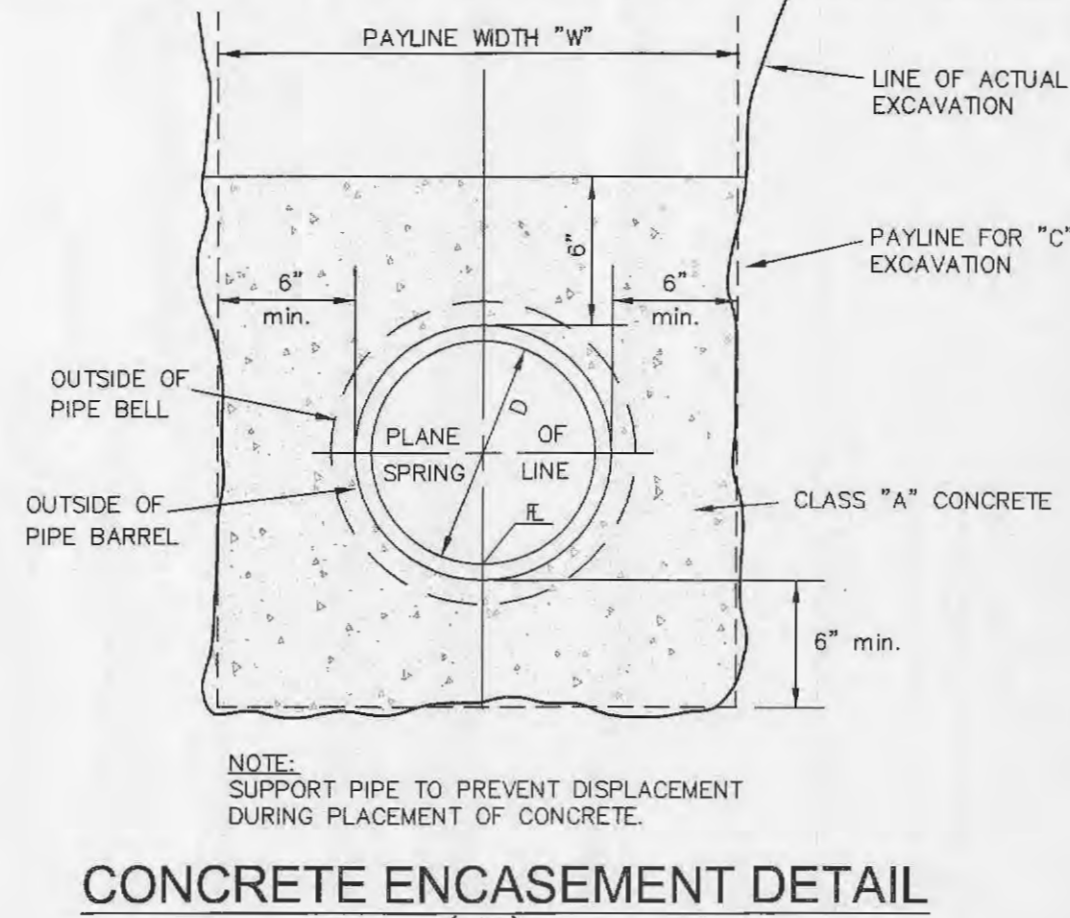
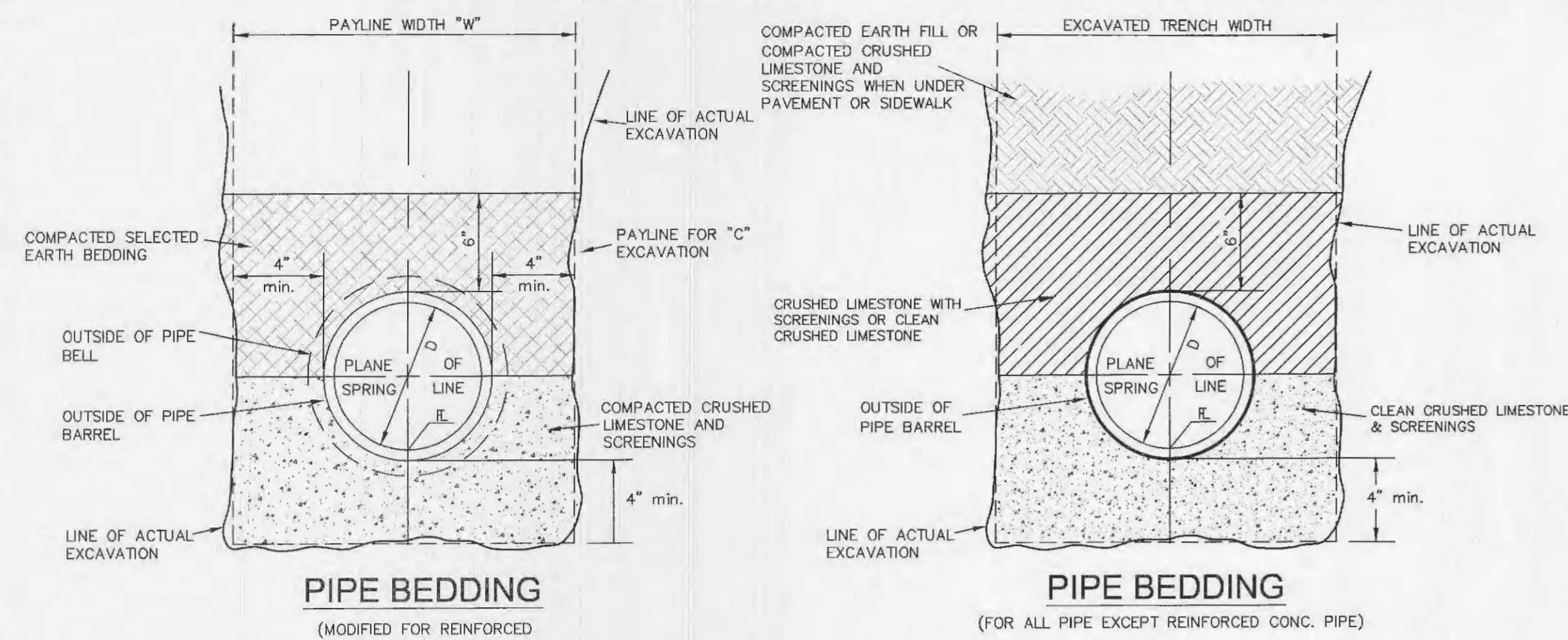
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SOAVE AUTOMOTIVE @ WELDON POINT
STORM SEWER PROFILES

Stock & Associates
Consulting Engineers, Inc.

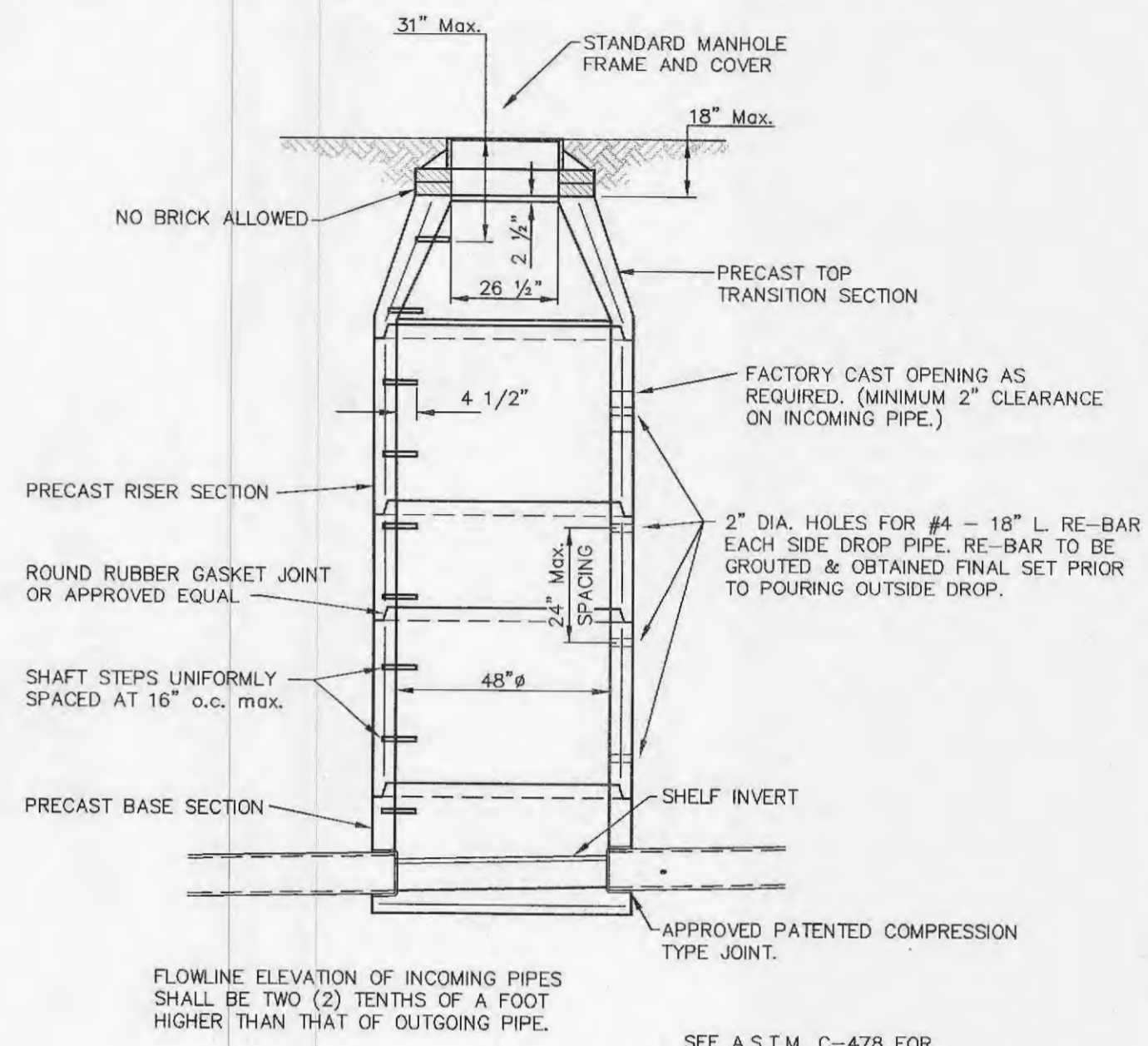
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STATE OF MISSOURI
PROFESSIONAL ENGINEER
GEORGE MICHAEL STOCK
NUMBER E-25116
10/20/05
GEORGE M. STOCK E-25116

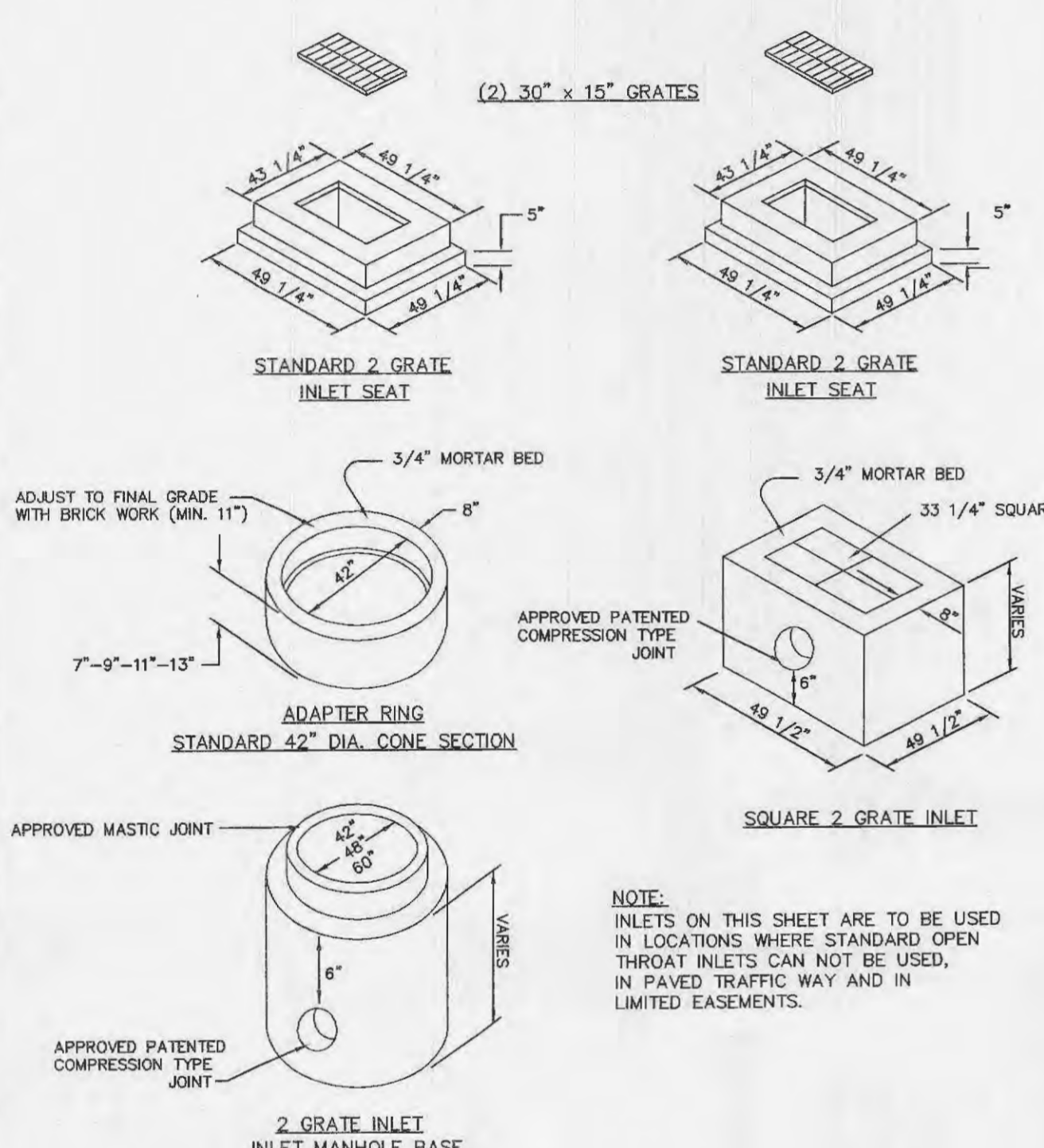


MANHOLE BASE PLAN

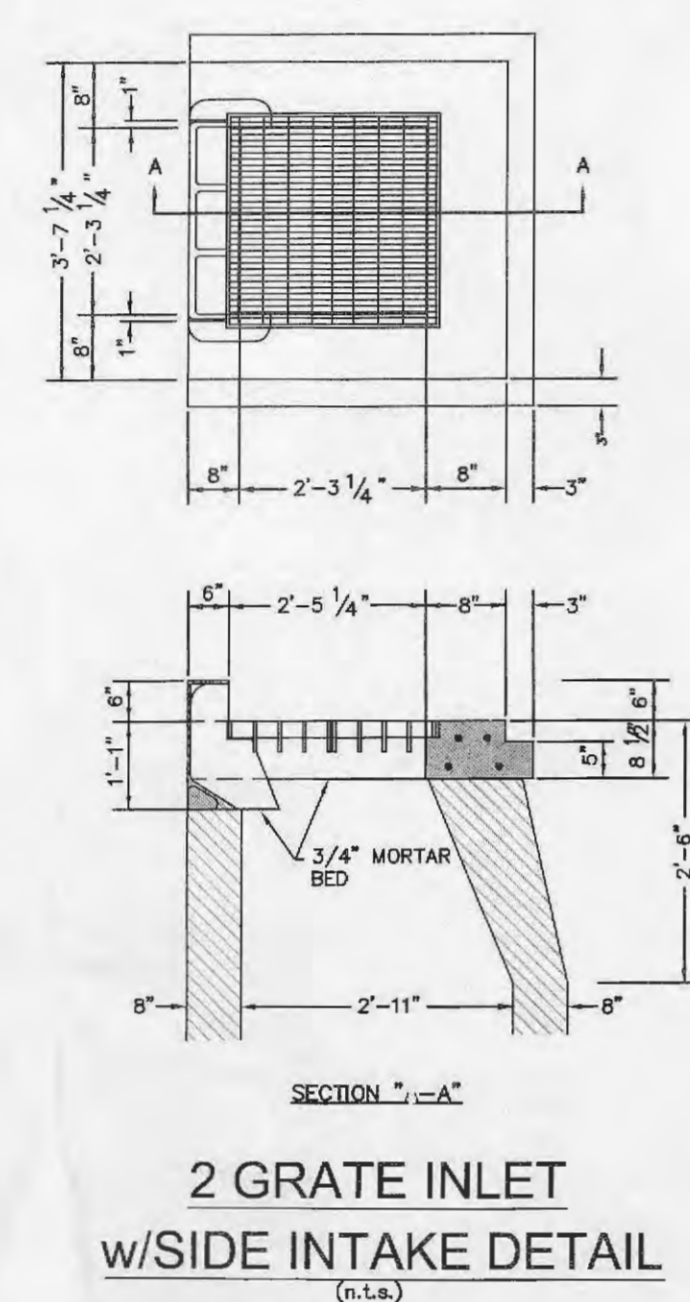
BASE SECTION



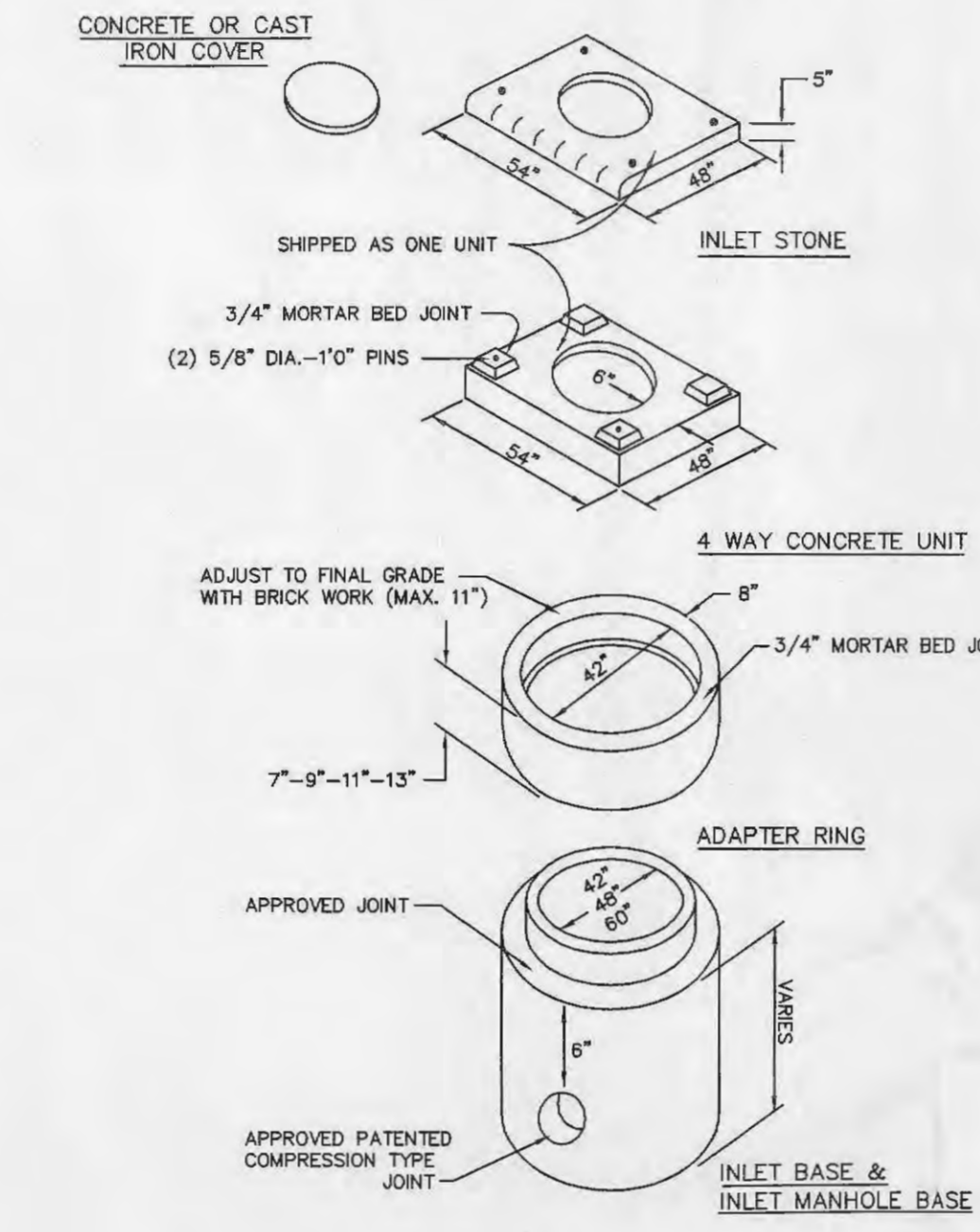
PRECAST MANHOLE



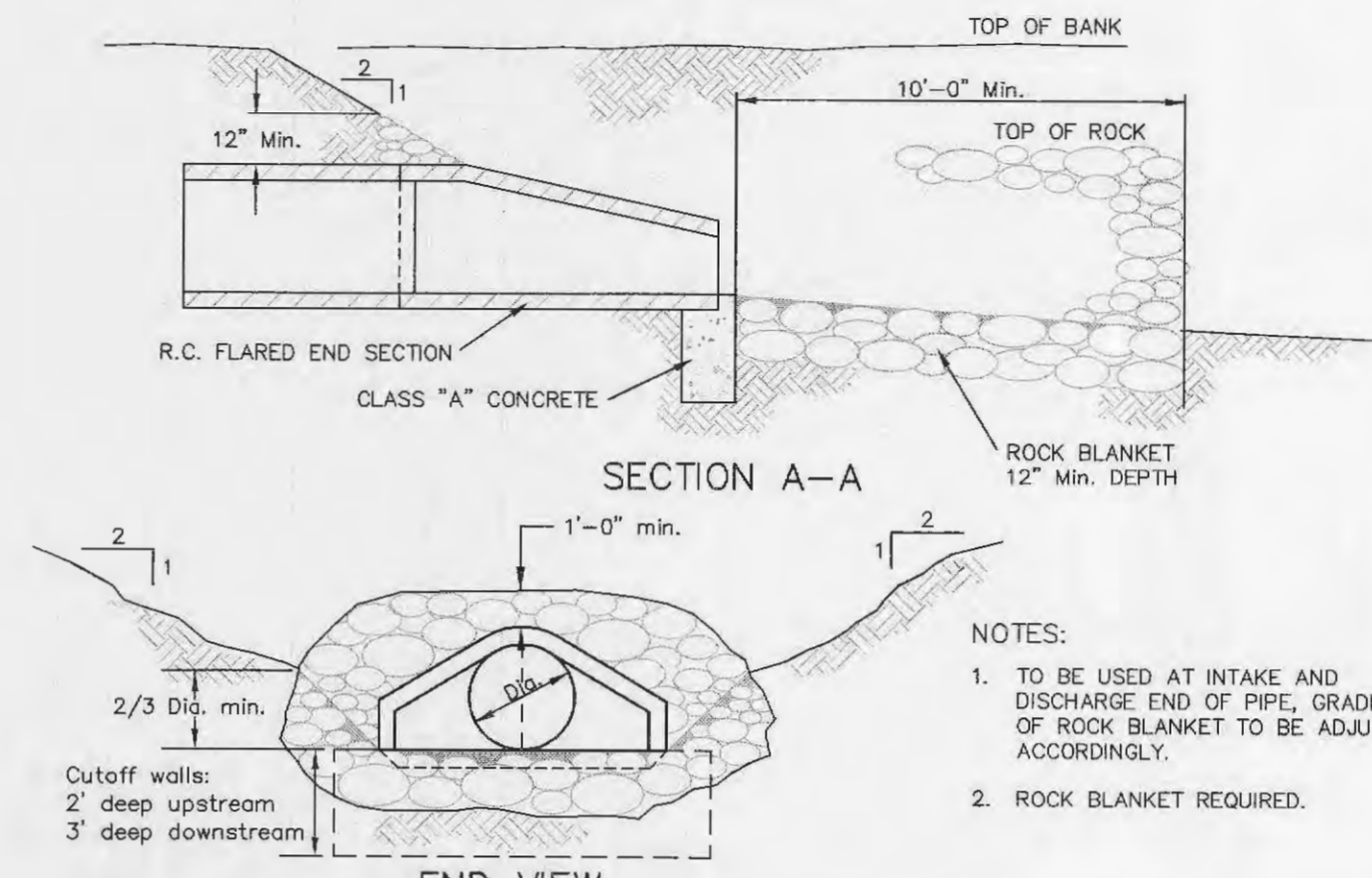
2 GRATE INLET DETAIL (n.t.s.)



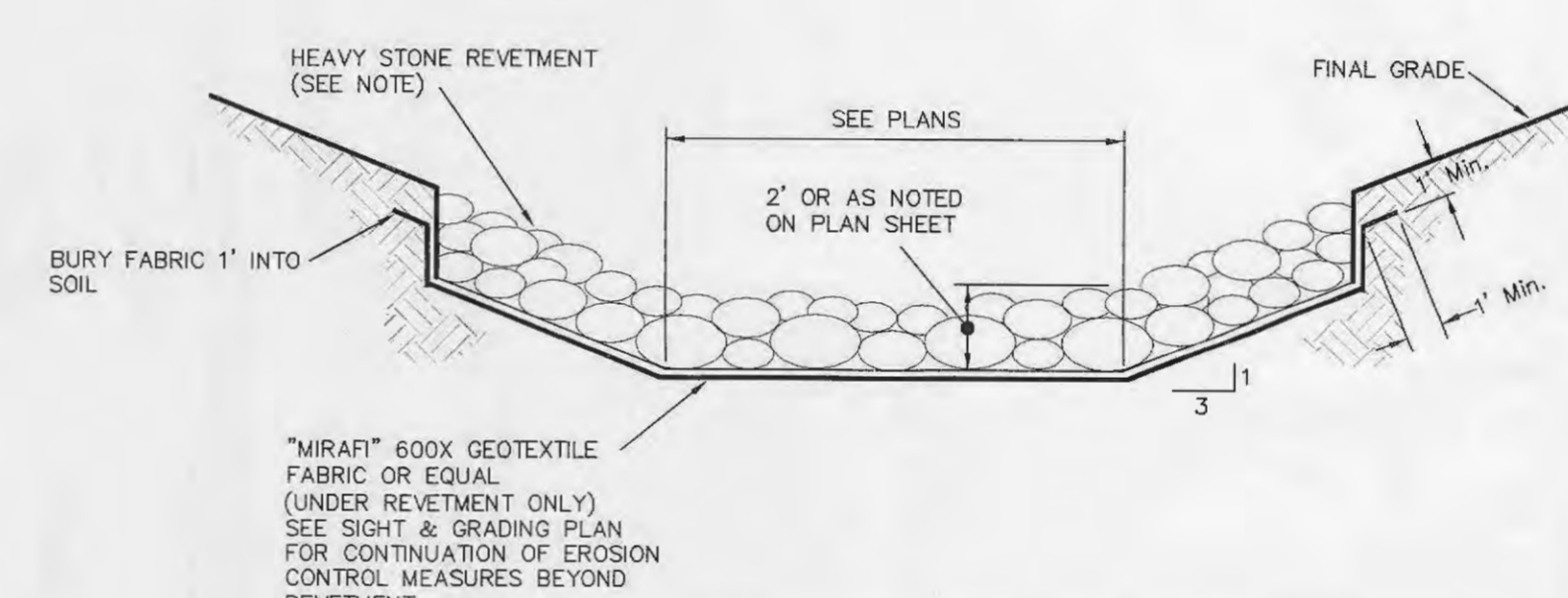
2 GRATE INLET W/SIDE INTAKE DETAIL (n.t.s.)



AREA INLET DETAIL (n.t.s.)



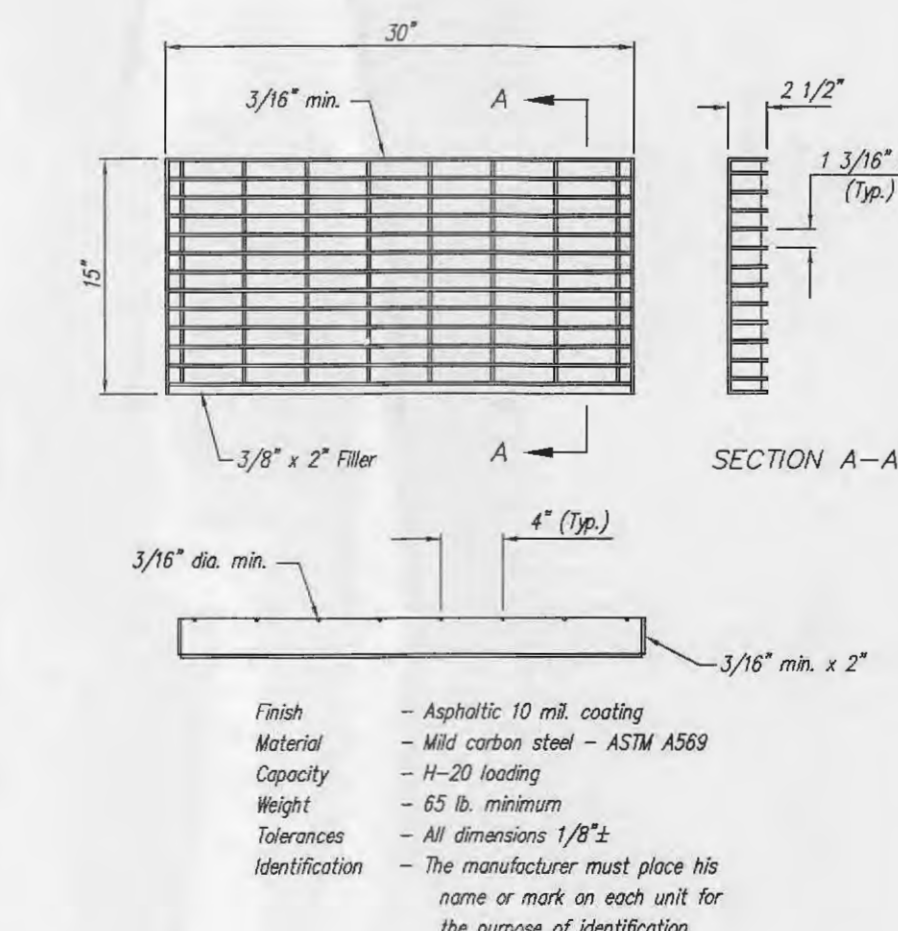
FLARED END SECTION



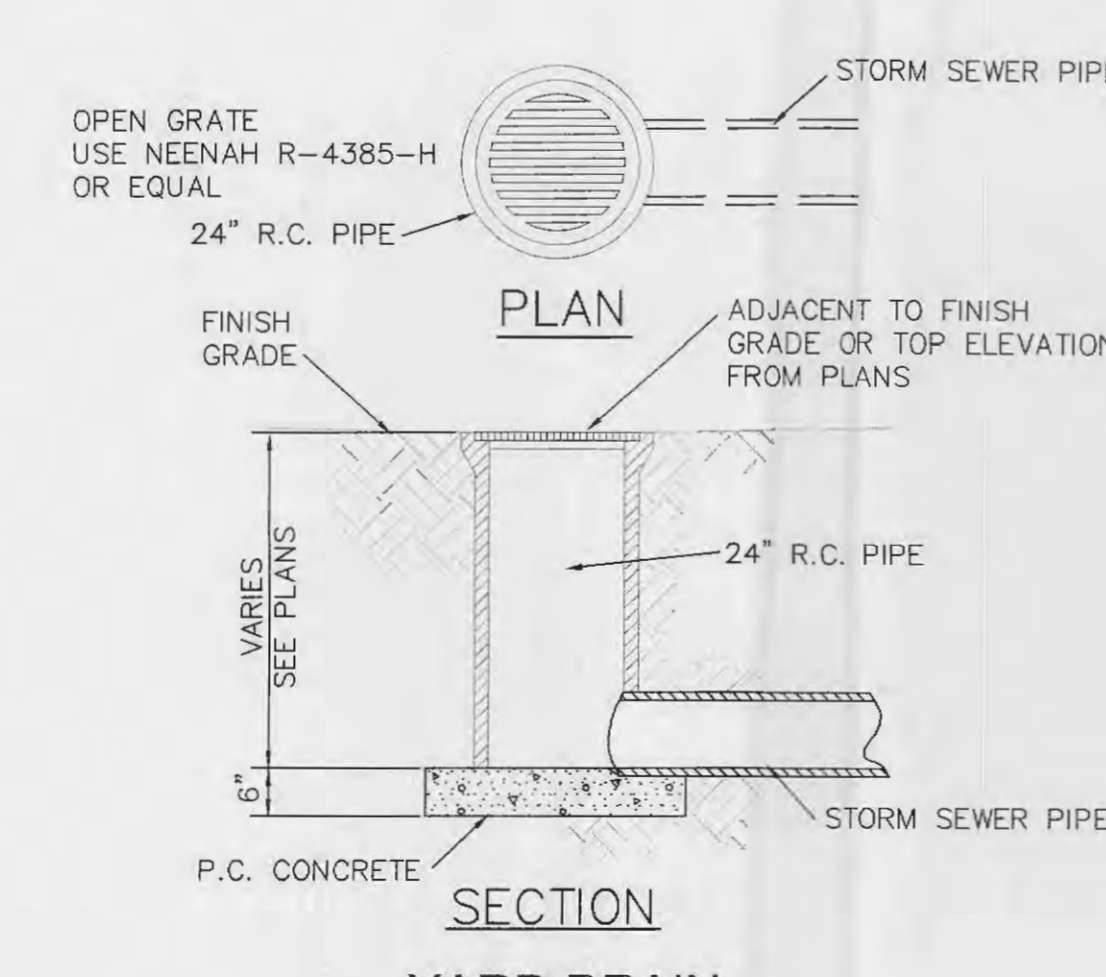
HEAVY STONE REVETMENT DETAIL (n.t.s.)

- NOTES:
 1. STONE FOR HEAVY STONE REVETMENT SHALL BE SOUND, DURABLE, AND FREE FROM CRACKS AND OTHER STRUCTURAL DEFECTS THAT WOULD CAUSE IT TO DETERIORATE. IT SHALL NOT CONTAIN ANY SOAPSTONE, SHALE, OR OTHER MATERIAL EASILY DISINTEGRATED. THE STONE FOR HEAVY STONE REVETMENT SHALL BE AT LEAST 12 INCH TO 18 INCH DIAMETER, dm 15 INCH.
 2. STONE FOR LIGHT STONE REVETMENT SHALL BE SOUND, DURABLE, AND FREE FROM CRACKS AND OTHER STRUCTURAL DEFECTS THAT WOULD CAUSE IT TO DETERIORATE. IT SHALL NOT CONTAIN ANY SOAPSTONE, SHALE, OR OTHER MATERIAL EASILY DISINTEGRATED. THE STONE SHALL BE IN BLOCKS AT LEAST 7" IN THICKNESS PERPENDICULAR TO THE SLOPE AND HAVE APPROXIMATELY RECTANGULAR FACES 7" OR MORE IN WIDTH. ALL BLOCKS SHALL WEIGH NOT LESS THAN 25 LBS. AND AT LEAST 75% SHALL WEIGH NOT LESS THAN 50 LBS.

CALL	USE	a	STRAIGHT BARS
C-1	2, 3, or 4 Grate	3'-4"	
G-2	6 & 8 Grate	5'-10"	
H-2	2 Grate	3'-6"	
H-3	3 & 6 Grate	4'-9"	
H-4	4 & 8 Grate	6'-0"	

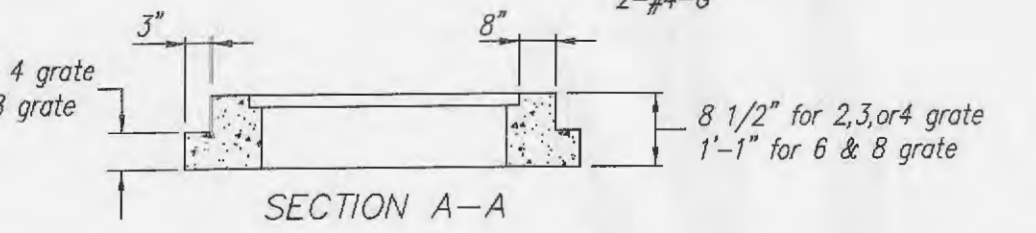


DETAIL OF STEEL GRATE (n.t.s.)



YARD DRAIN

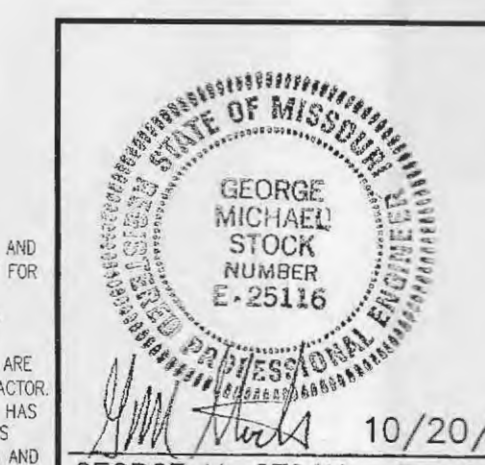
STEEL REQUIREMENTS FOR GRATE INLET SEAT (n.t.s.)



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HYDRAULIC CALCULATION SHEET (SEE DRAINAGE AREA MAP FOR P.I. AND Q (inflow) FOR EACH STRUCTURE)

Structure Number	LINE		FLOW LINE ELEVATIONS		Length (ft)	Flowline Grade (ft/ft)	Pipe Size (in.)	Full Flow Cap. (cfs)	Total (Q) (cfs)	Mean Full Flow Vel. (V) (ft/s)	Bend Coef.	Velocity Head (V _v) (ft)	QV _v (ft ³ /s)	Pipe Coef. (n)	HEAD LOSS			Hydraulic Elevations			Structure TOP Elevation	Free Board	Structure Number					
	Upper structure	Lower structure	Upper structure	Lower structure											H _f (ft)	Junction (ft)	Bend (ft)	Total H _{tot}	Upper F.L. + Dia.	Lower H.E. + H _f				Lower H.E.	Upper H.E. + H _m			
7	7	6	578.68	577.33	135.00	0.0100	12	3.57	0.32	0.41	0.00	0.00	0.00	0.013	0.01	0.00	0.00	0.00	0.00	0.00	579.68	578.34	578.33	578.69	583.00	4.31	7	
6	6	5	577.33	573.53	190.00	0.0200	12	5.05	1.17	1.49	0.18	0.03	0.04	0.013	0.20	0.00	0.01	0.01	0.01	0.01	0.01	578.33	574.84	574.63	577.54	582.75	5.21	6
5	5	4	573.53	572.93	30.00	0.0200	12	5.05	2.59	3.30	0.60	0.17	0.44	0.013	0.16	0.00	0.10	0.10	0.10	0.10	0.10	574.53	574.12	573.96	574.63	582.00	7.37	5
4	4	3	572.93	570.29	132.00	0.0200	12	5.05	2.76	3.51	0.18	0.19	0.53	0.013	0.79	0.00	0.03	0.03	0.03	0.03	0.03	573.93	572.34	571.55	573.96	581.15	7.19	4
3	3	2	570.29	567.79	125.00	0.0200	15	9.16	2.76	2.25	0.18	0.08	0.22	0.013	0.23	0.00	0.01	0.01	0.01	0.01	0.01	571.54	570.37	570.14	571.55	578.00	6.45	3
2	2	EX30	567.79	565.79	100.00	0.0200	15	9.16	2.76	2.25	0.70	0.08	0.22	0.013	0.18	0.00	0.05	0.05	0.05	0.05	0.05	569.04	570.08	569.90	570.14	575.00	4.86	2
EX30 TAKEN FROM STOCK AND ASSOCIATES (JOB NO. 200-2180.2) "PROGRESS POINT ROAD, SEWER, AND UTILITY PLANS" APPROVED: 7-29-02															HYDRAULIC GRADE LINE =													
25	25	24	575.00	574.40	60.00	0.0100	12	3.57	0.15	0.19	0.18	0.00	0.00	0.013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	576.00	575.42	575.42	575.43	579.65	4.22	25
24	24	23	574.40	573.66	74.00	0.0100	12	3.57	1.42	1.81	0.35	0.05	0.07	0.013	0.12	0.00	0.02	0.02	0.02	0.02	0.02	575.40	574.93	574.82	575.42	579.50	4.08	24
23	23	22	573.66	560.61	261.00	0.0500	12	7.99	4.20	5.35	0.35	0.44	1.87	0.013	3.62	0.00	0.16	0.16	0.16	0.16	0.16	574.66	567.63	564.01	574.82	579.25	4.43	23
22	22	21	560.61	558.49	50.00	0.0424	15	13.34	5.50	4.48	0.18	0.31	1.72	0.013	0.36	0.00	0.06	0.06	0.06	0.06	0.06	561.86	563.95	563.59	564.01	566.50	2.49	22
21	21	20	558.49	557.00	35.00	0.0426	15	13.36	7.09	5.78	0.00	0.52	3.67	0.013	0.42	0.00	0.00	0.00	0.00	0.00	0.00	559.74	563.59	563.17	563.59	566.10	2.51	21
20															HYDRAULIC GRADE LINE = (15 YR. POND ELEV.)													
17	17	16	575.00	574.70	30.00	0.0100	12	3.57	0.19	0.24	0.00	0.00	0.00	0.013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	576.00	576.15	576.15	576.15	579.15	3.00	17
16	16	15	574.70	573.65	105.00	0.0100	12	3.57	1.32	1.68	0.18	0.04	0.06	0.013	0.14	0.00	0.01	0.01	0.01	0.01	0.01	575.70	576.14	576.00	576.15	580.50	4.35	16
15	15	14	573.65	573.16	49.00	0.0100	12	3.57	3.20	4.07	0.60	0.26	0.82	0.013	0.39	0.00	0.15	0.15	0.15	0.15	0.15	574.65	575.84	575.45	576.00	579.15	3.15	15
14	14	13	573.16	571.76	140.00	0.0100	12	3.57	4.26	5.42	0.43	0.46	1.95	0.013	2.00	0.00	0.20	0.20	0.20	0.20	0.20	574.16	575.25	573.26	575.45	580.50	5.05	14
13	13	12	571.76	568.26	175.00	0.0200	15	9.16	6.59	5.37	0.55	0.45	2.95	0.013	1.82	0.00	0.25	0.25	0.25	0.25	0.25	573.01	571.33	569.51	573.26	577.20	3.94	13
12	12	11	559.50	557.00	50.00	0.0500	15	14.48	7.40	6.03	0.00	0.56	4.18	0.013	0.66	0.00	0.00	0.00	0.00	0.00	0.00	560.75	563.83	563.17	569.26	573.00	3.74	12
11															HYDRAULIC GRADE LINE = (15 YR. POND ELEV.)													
10	10	9	556.00	555.85	30.00	0.0050	24	16.04	21.20	6.75	0.47	0.71	14.99	0.013	0.26	0.00	0.33	0.33	0.33	0.33	0.33	558.00	558.11	557.85	558.45	564.25	5.80	10
9	9	8	555.85	550.00	83.00	0.0705	24	60.22	21.20	6.75	0.00	0.71	14.99	0.013	0.73	0.00	0.00	0.00	0.00	0.00	0.00	557.85	552.73	552.00	557.85	563.00	5.15	9
8															HYDRAULIC GRADE LINE = (TOP OF PIPE)													
18	18	14	574.09	573.16	93.00	0.0100	12	3.57	1.06	1.35	0.50	0.03	0.03	0.013	0.08	0.00	0.01	0.01	0.01	0.01	0.01	575.09	574.24	574.16	575.10	579.00	3.90	18
14															HYDRAULIC GRADE LINE =													
19	19	15	574.70	573.65	21.00	0.0500	12	7.99	1.56	1.99	0.65	0.06	0.10	0.013	0.04	0.00	0.04	0.04	0.04	0.04	0.04	575.70	574.69	574.65	575.74	579.10	3.36	19
15															HYDRAULIC GRADE LINE =													
															512.69													

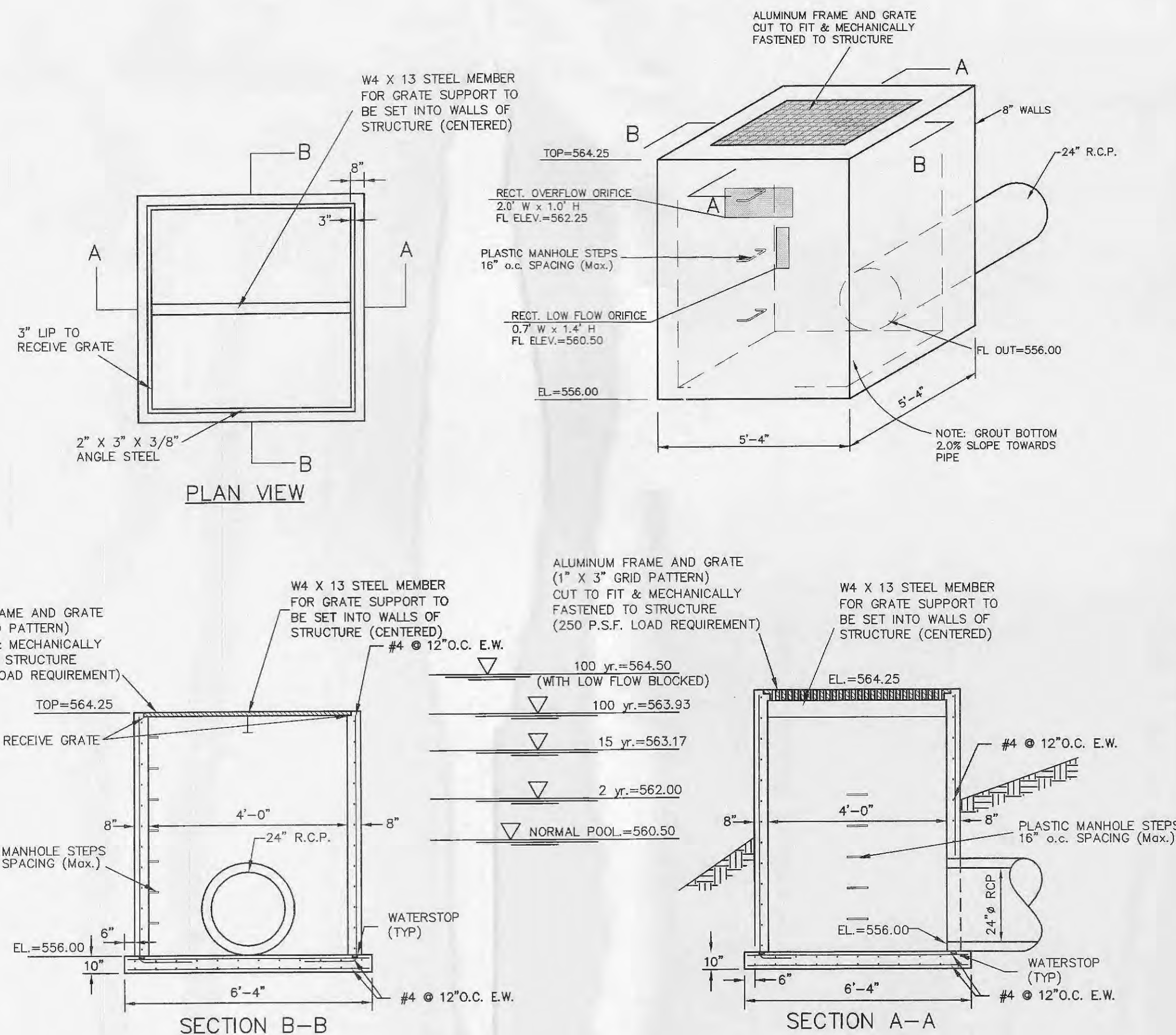
FORMULAS:

MEAN FULL FLOW VELOCITY: $V = Q_{ACT} / A_{PIPE}$
 FRICTION LOSS (H): $H_f = 2.87 n^2 (LV^2/d^{4.33})$
 VELOCITY HEAD: $V_h = V^2/2g$
 JUNCTION LOSSES (JUNC.) = $[Q_{in} V_{h(in)} - \sum (Q_{out} V_{h(out)})] \times 1.33 / [Q_{out}]$
 BEND LOSSES (BEND) = $(V^2) \times \text{ANGLE COEFFICIENT}$

Note: 1. IF MORE THAN ONE INCOMING LINE, CALC. EACH BEND LOSS AND ADD TOGETHER.
 2. NO STRUCTURE LOSSES TO BE CALCULATED AT A DROP
 3. IF $QV_{h(in)} > QV_{h(out)}$, NO JUNCTION LOSSES TO BE CALCULATED.

Area No.	Area (Acres)	P.I. Factor	Flow (Q=PIxA) (cfs)	Onsite Q to Pond & Overflow (cfs)
1	0.6	2.29	1.37	1.37
2	0.23	4.77	1.10	1.10
3	0.45	4.77	2.15	2.15
4	0.31	4.77	1.48	1.48
5	0.12	2.29	0.27	0.27
6	0.59	6.00	3.54	3.54
7	0.07	4.77	0.33	0.33
8	0.03	2.29	0.07	0.07
9	0.36	4.77	1.72	1.72
10	0.09	2.29	0.21	0.21
11	0.1	2.29	0.23	to offsite detention
12	0.4	4.77	1.91	to offsite detention
13	0.32	4.77	1.53	to offsite detention
14	0.11	2.29	0.25	to offsite detention
15	0.24	4.77	1.14	to offsite detention
16	0.09	4.77	0.43	to offsite detention
17	0.44	4.77	2.10	
18	0.09	4.77	0.43	
19	0.26	6.00	1.56	
20	0.3	4.77	1.43	
21	0.35	4.77	1.67	
(100 yr., 20 min.) Flow through Overflow Total:				21.2

* From Drainage Area Map



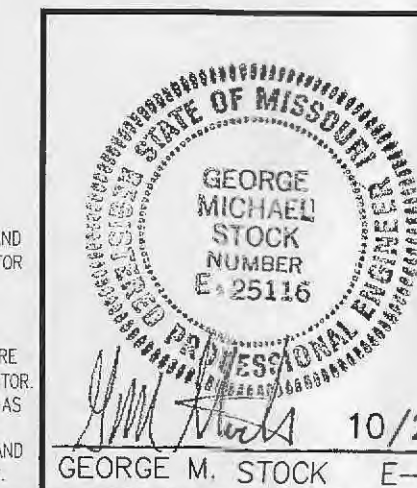
OUTFALL STRUCTURE #10

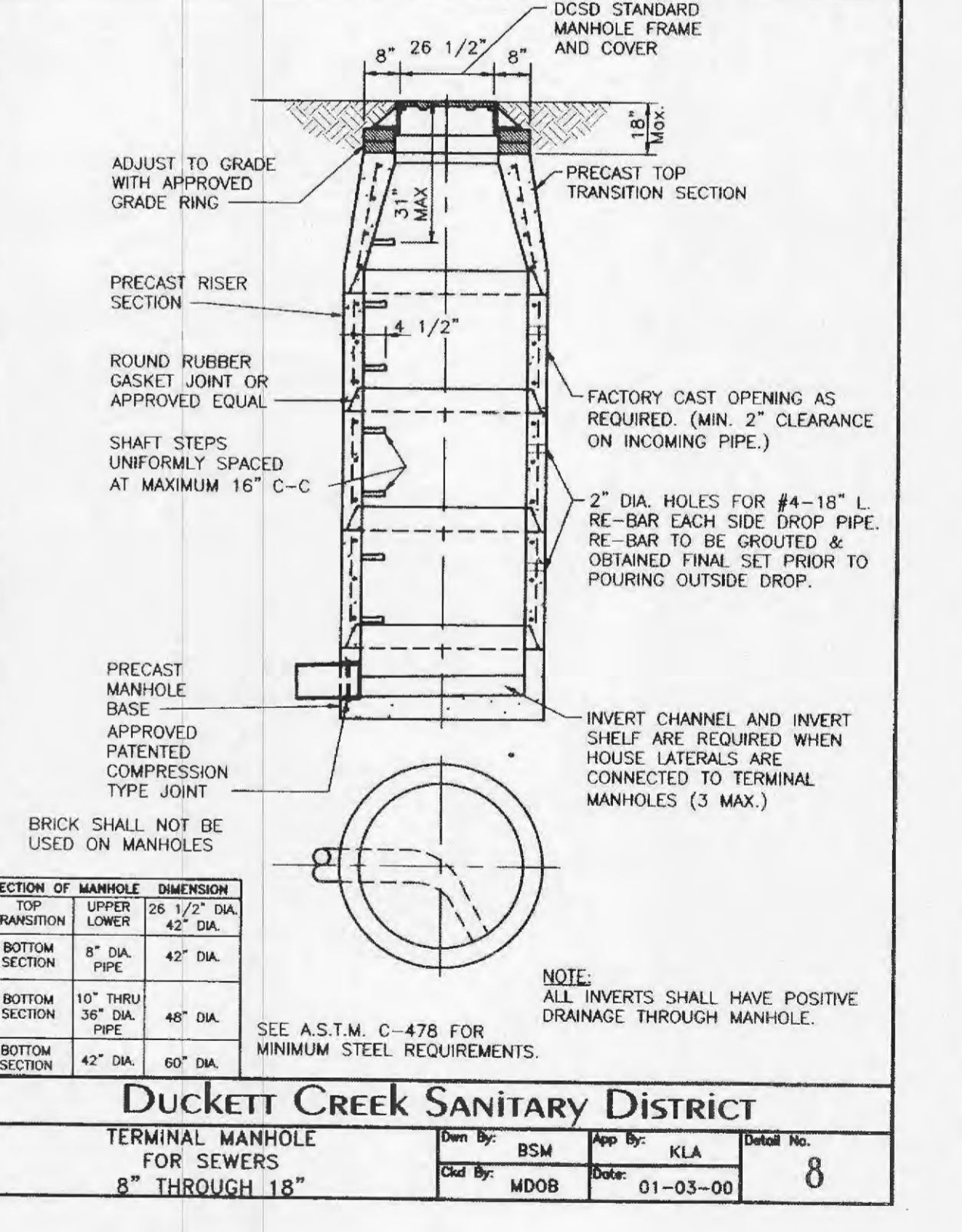
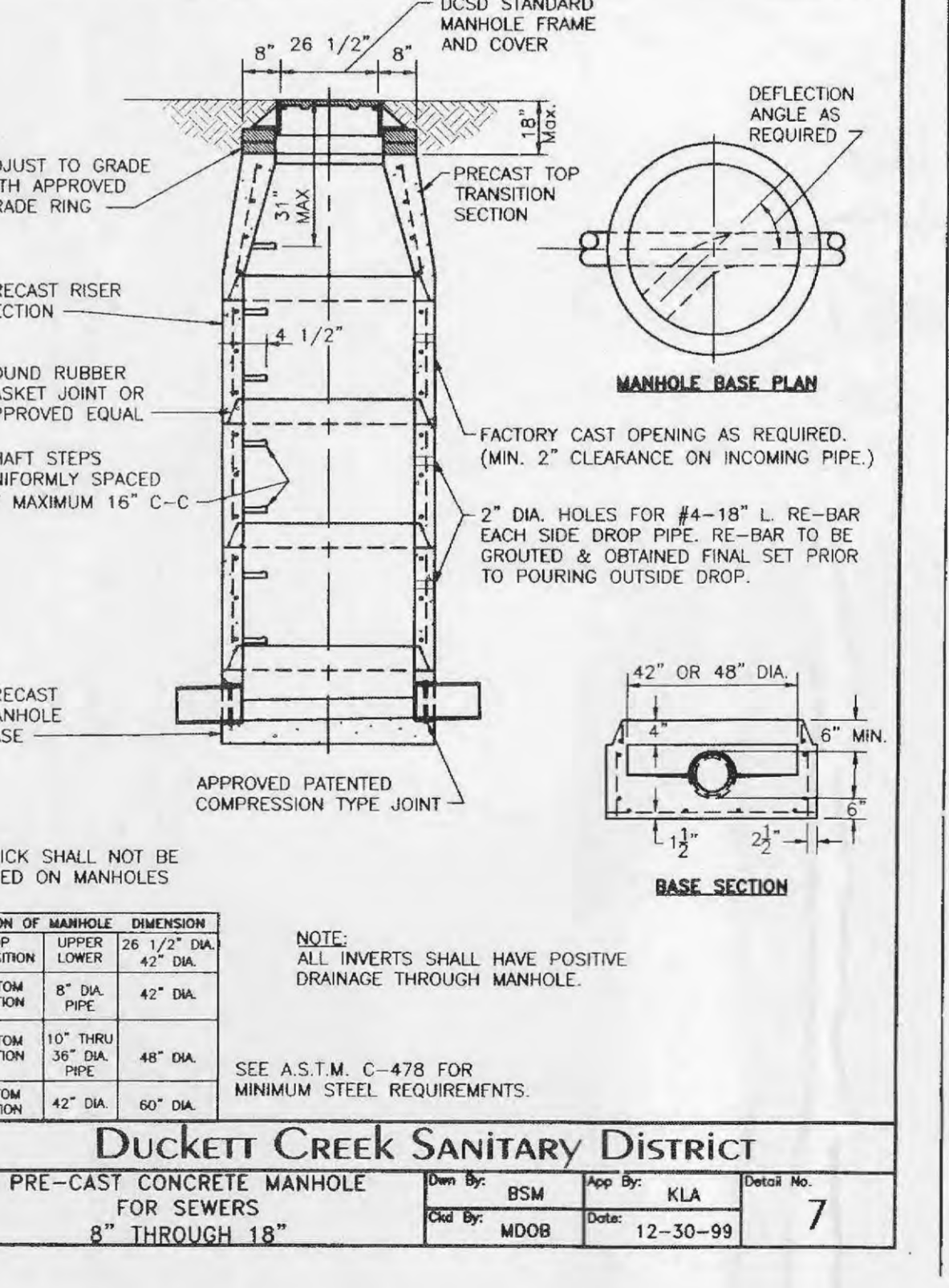
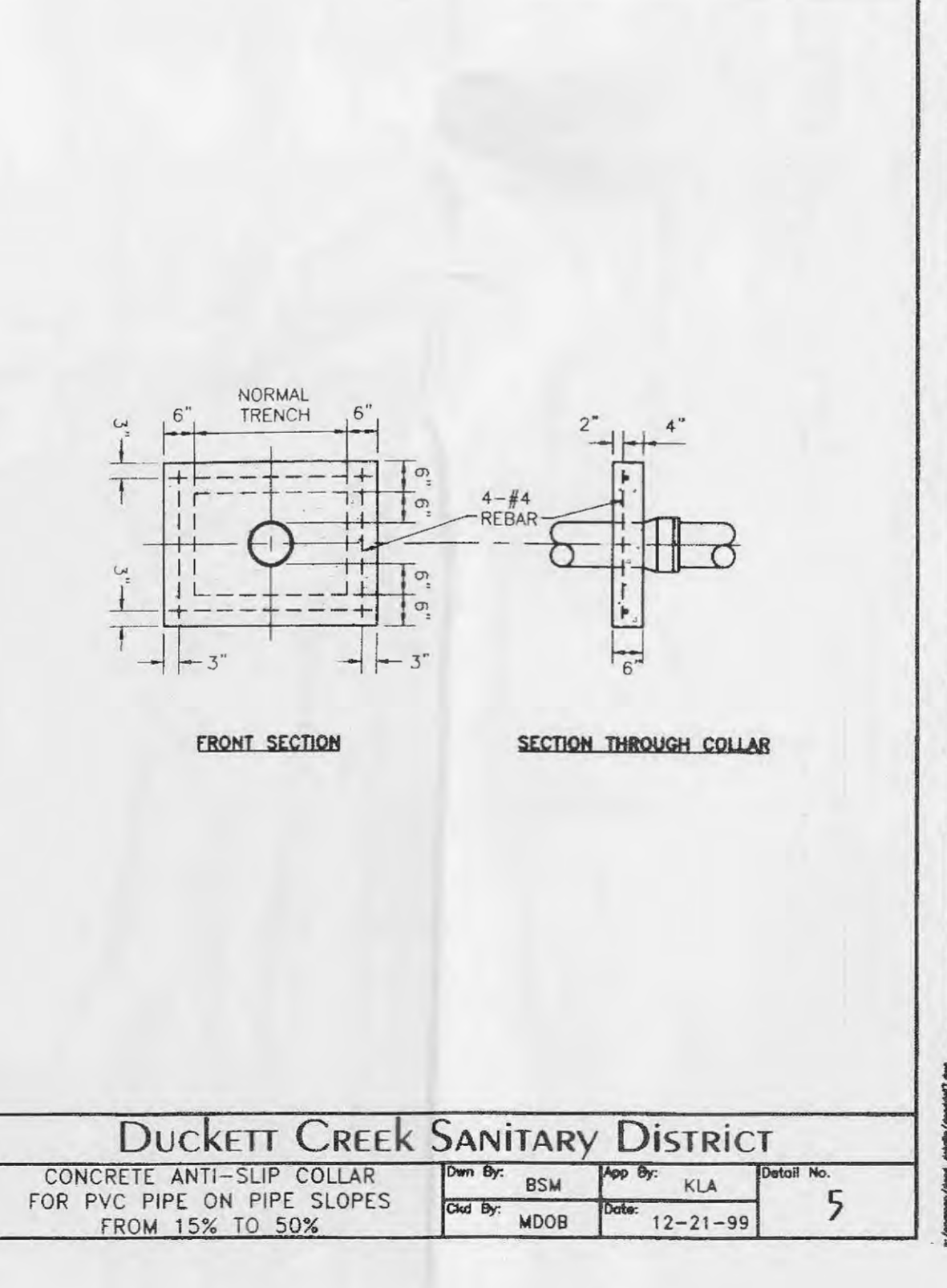
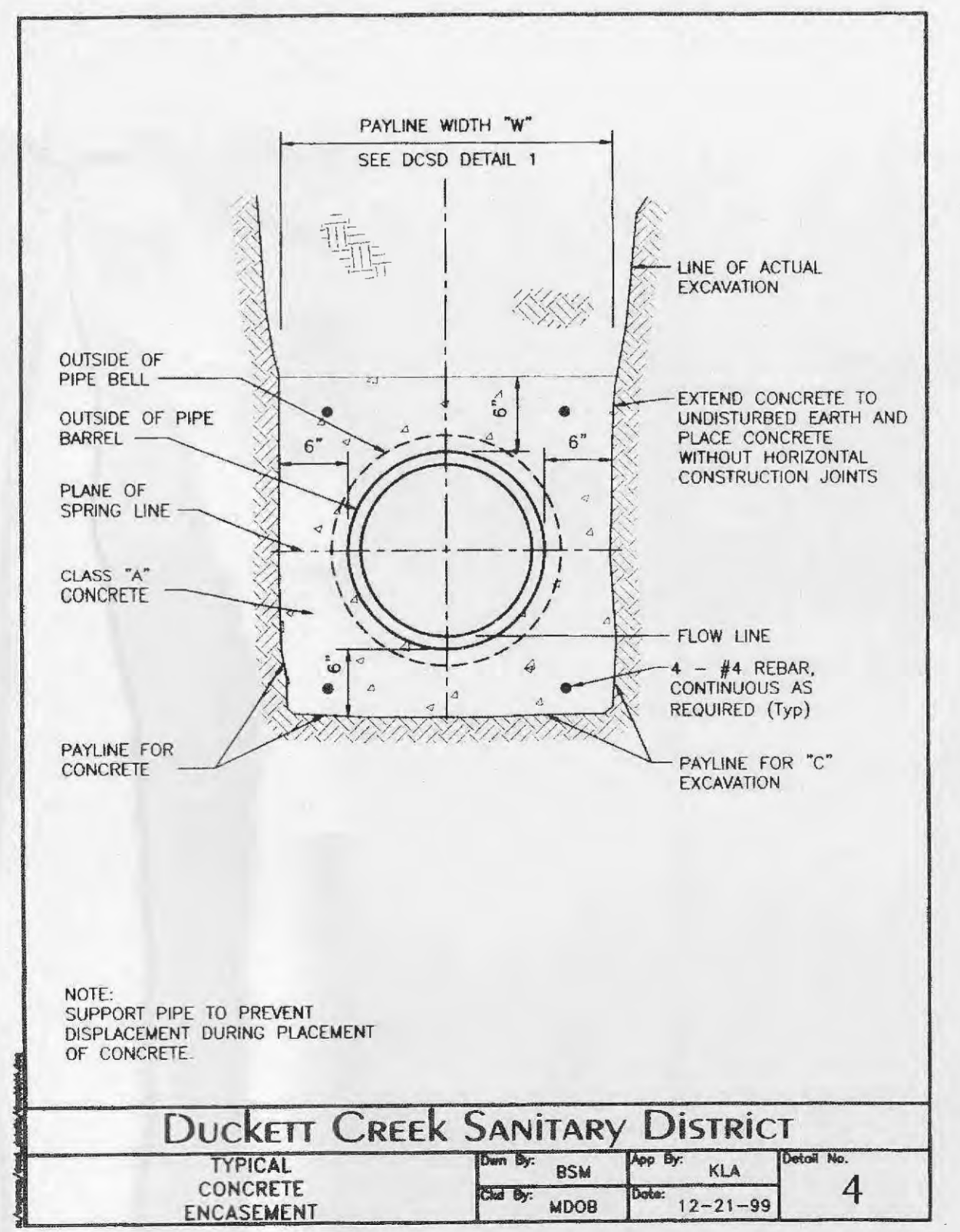
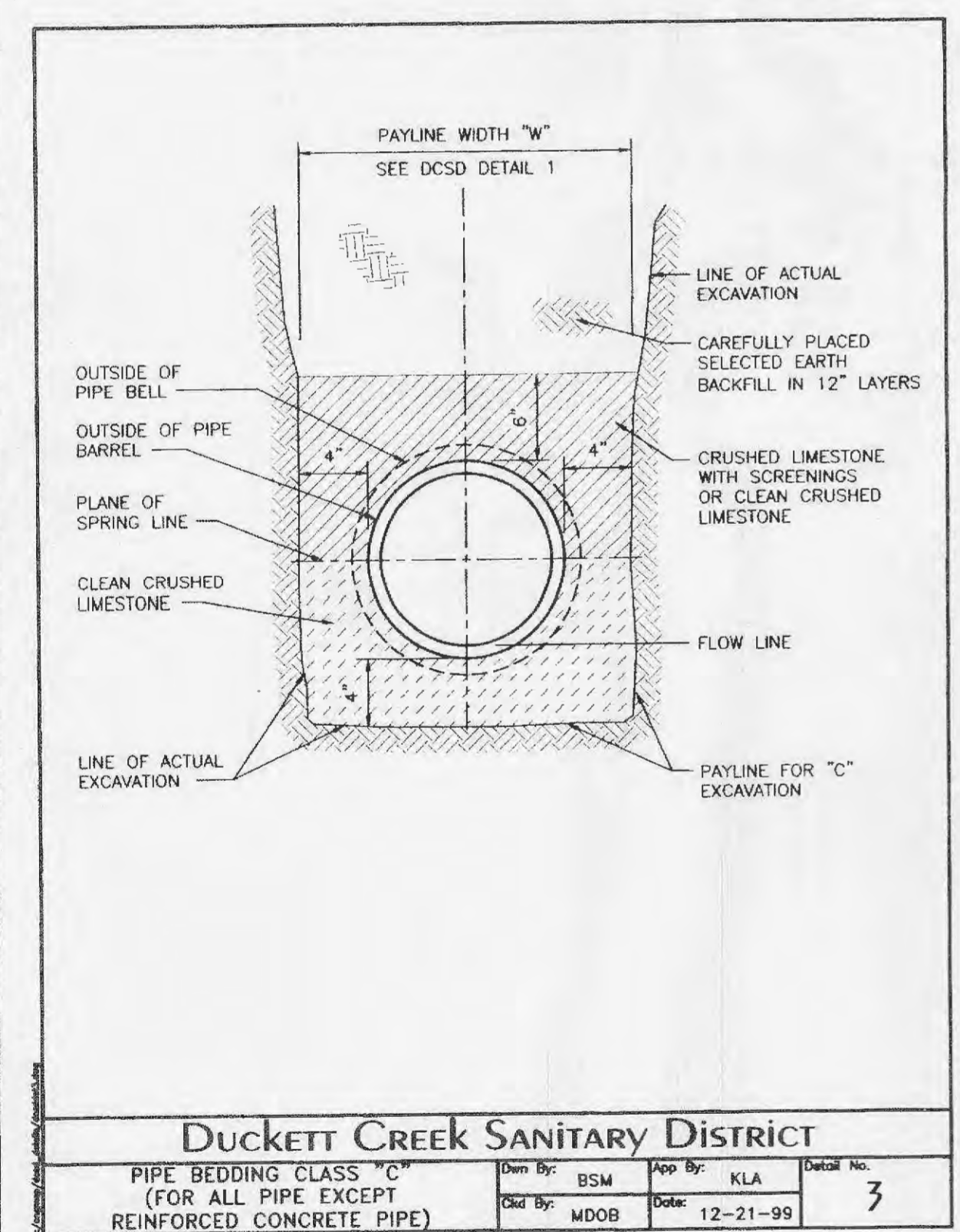
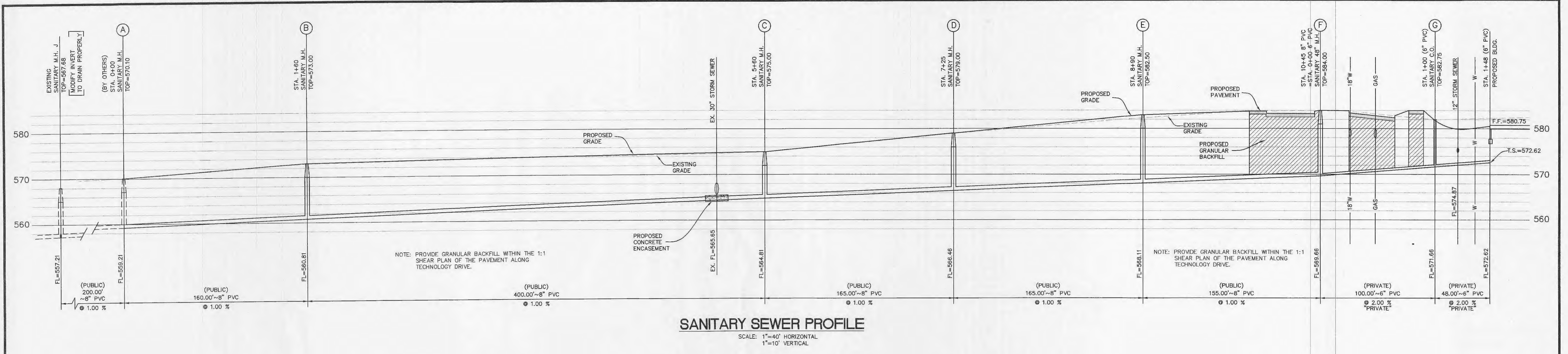
10/20/05 - REVISED PER REVIEW COMMENTS
 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
 9/27/05 - REVISED PER MODOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT
 STORM SEWER DETAILS/HYDRAULICS

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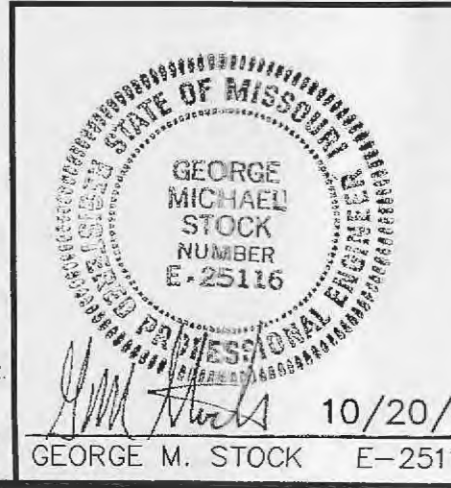
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SOAVE AUTOMOTIVE @ WELDON POINT
 SANITARY SEWER PROFILES/DETAILS

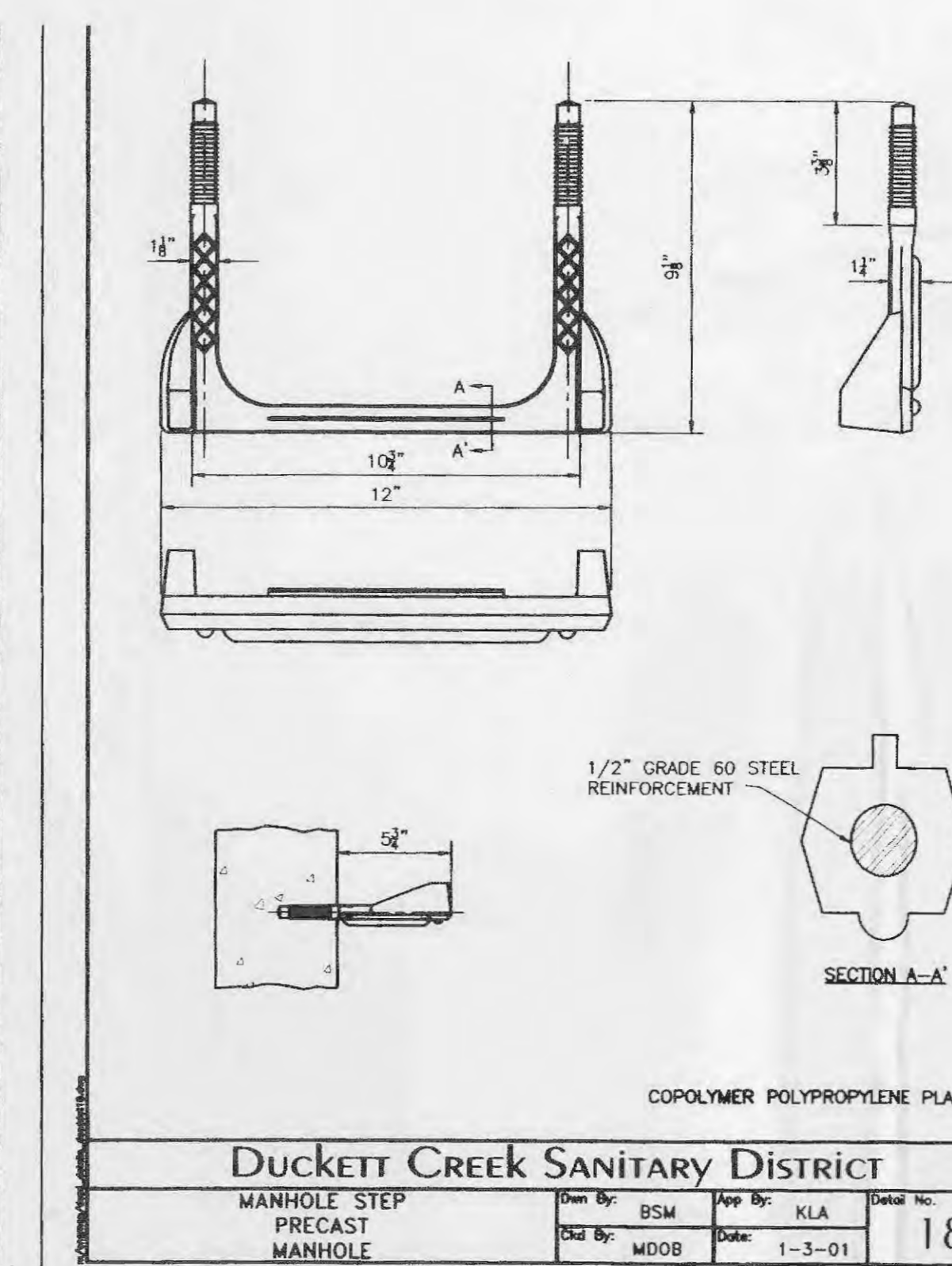
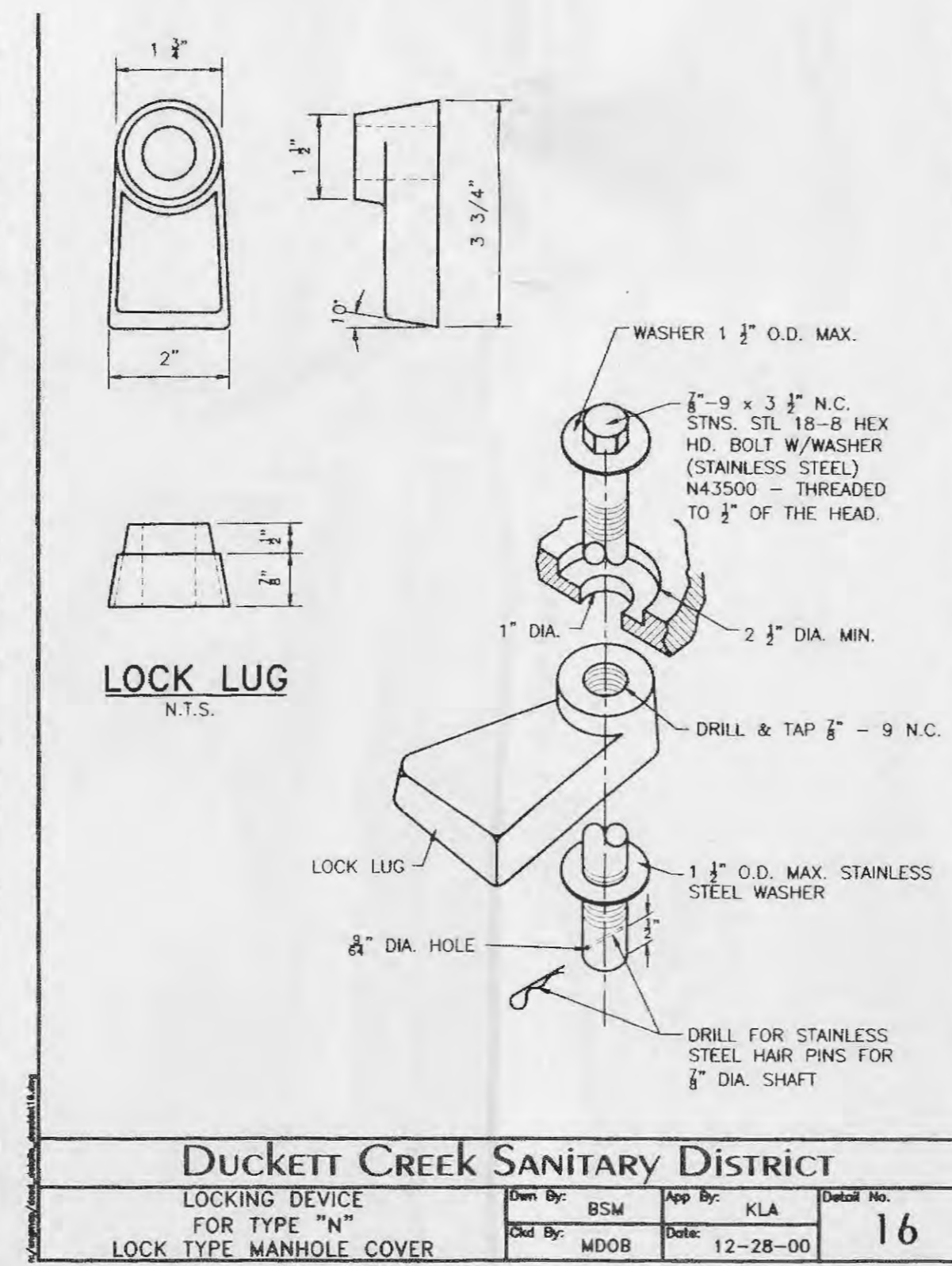
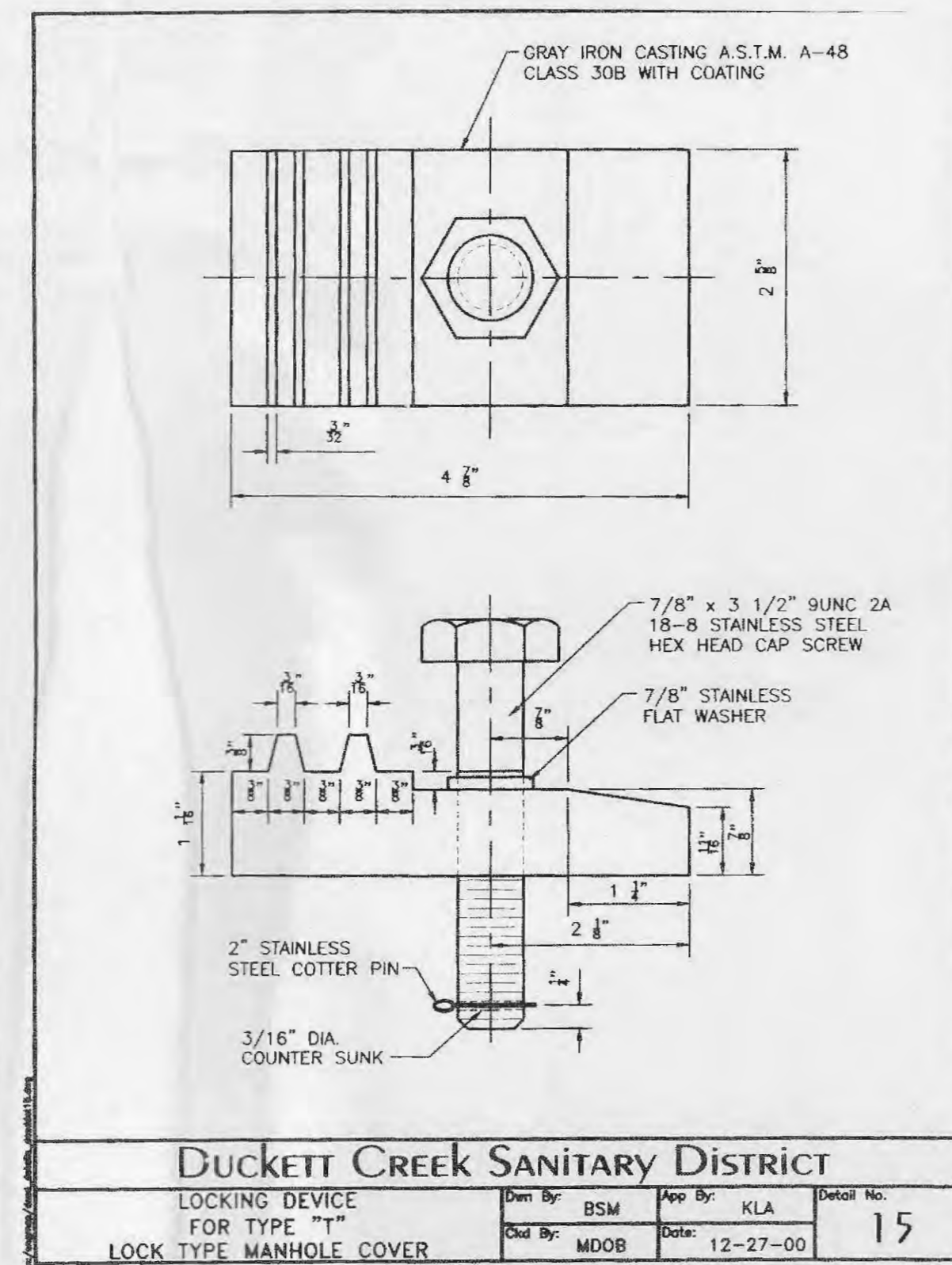
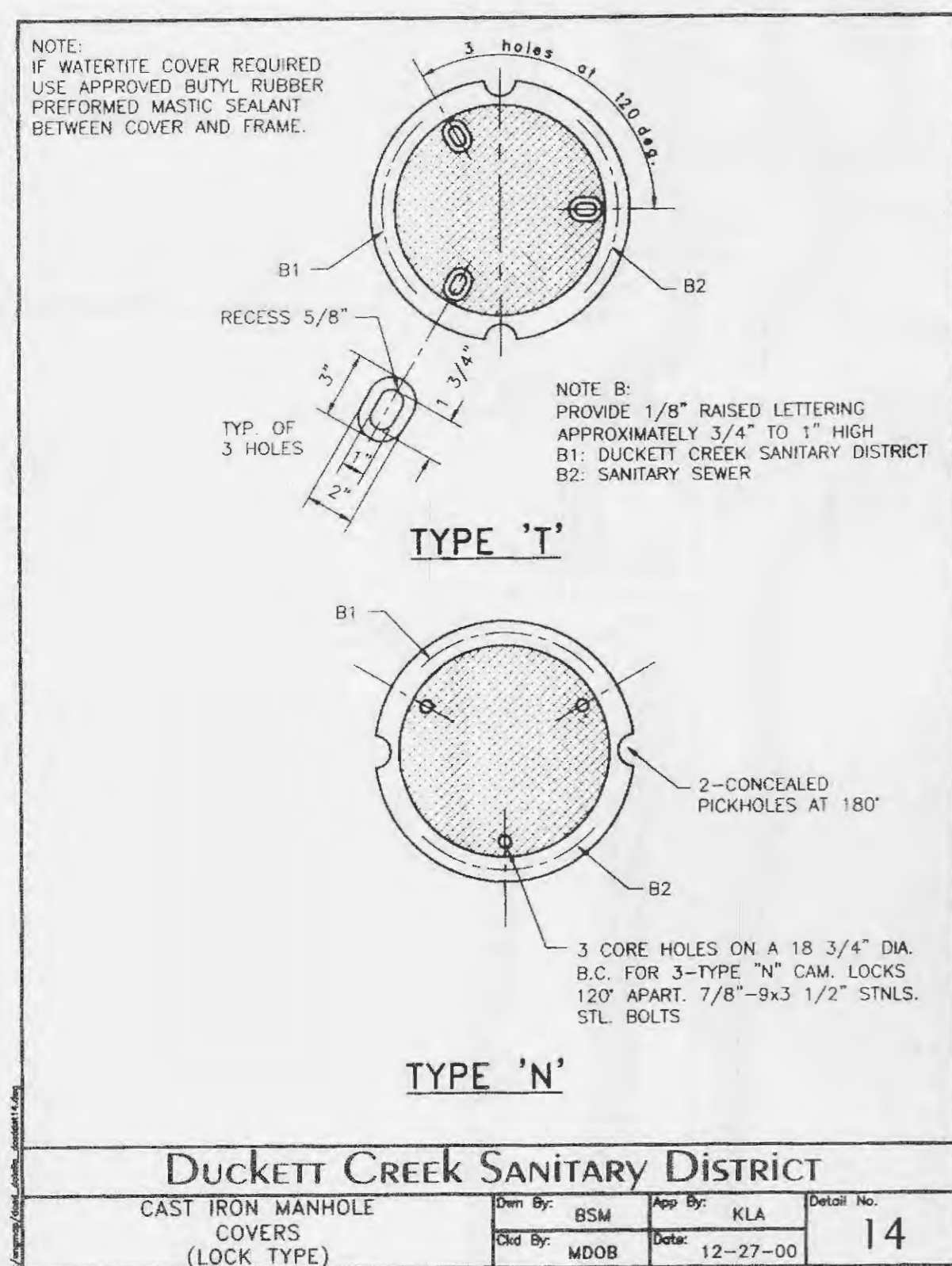
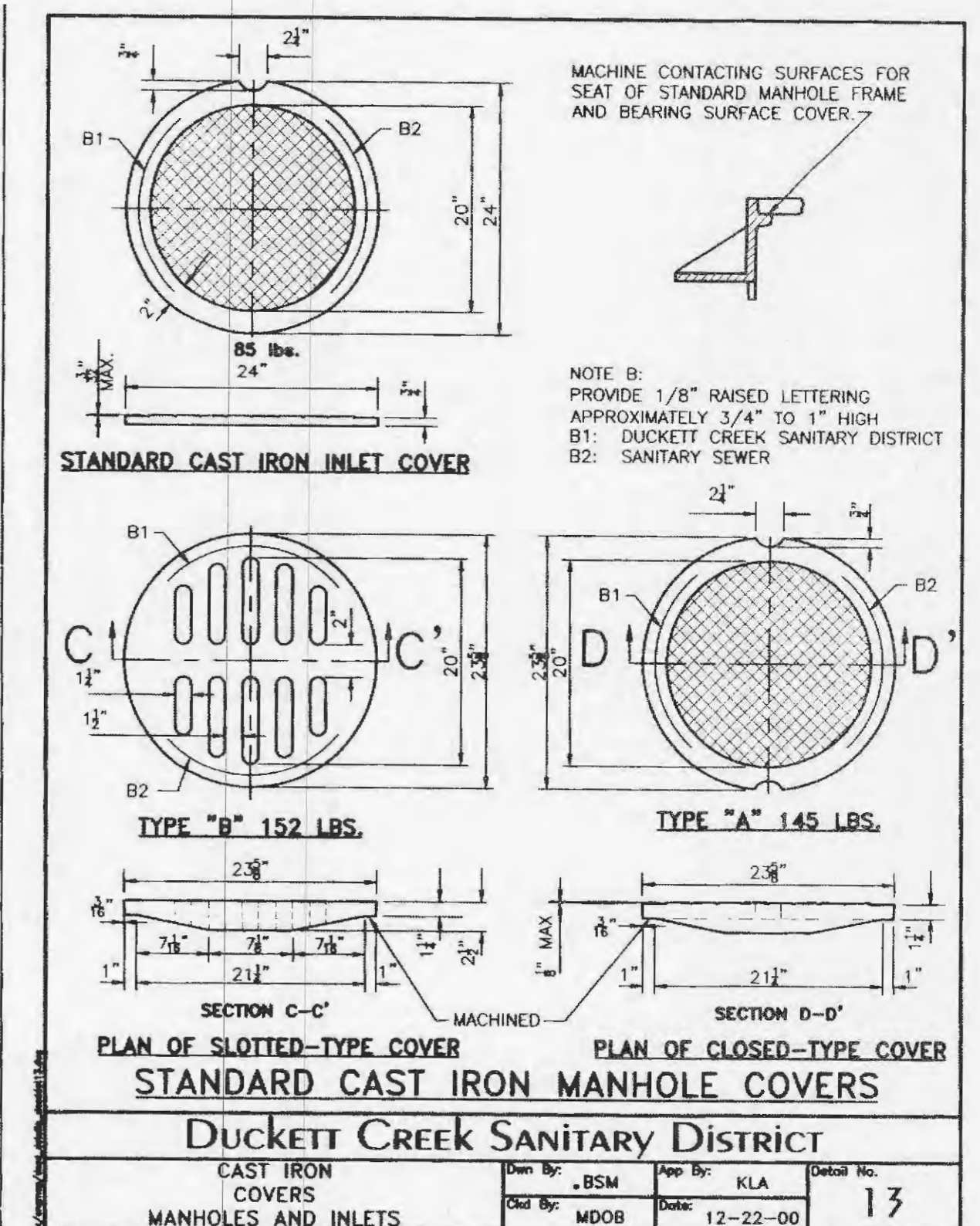
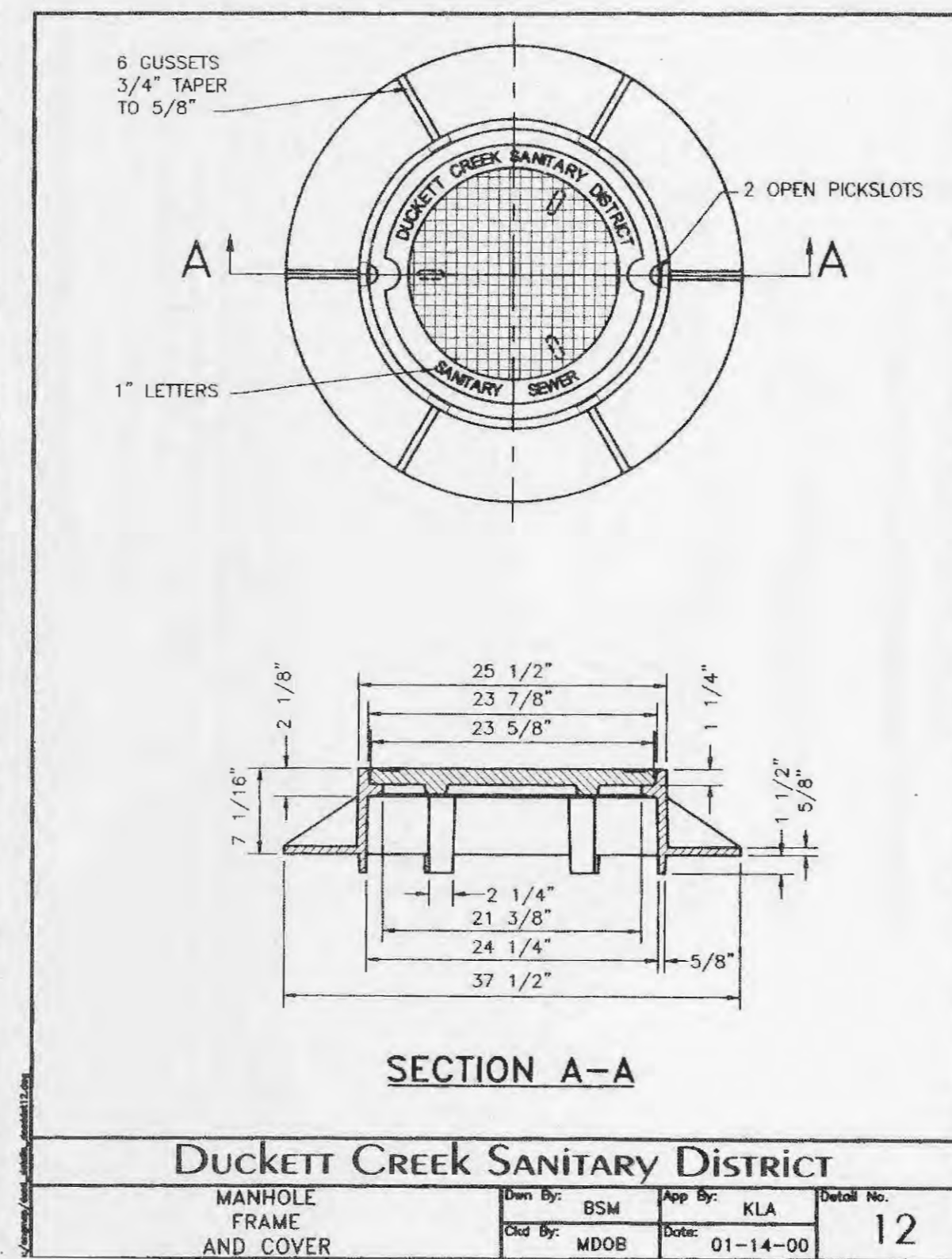
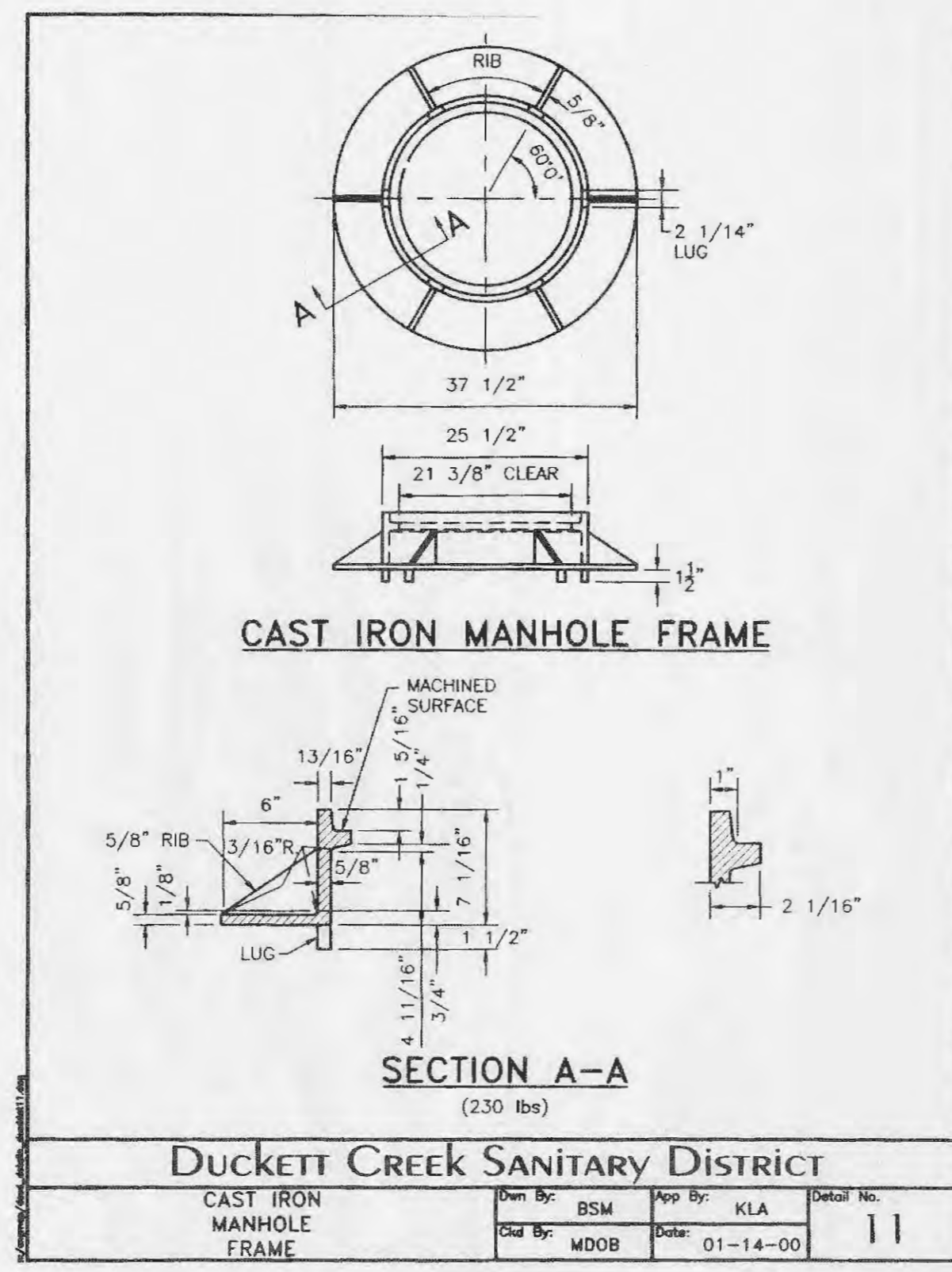
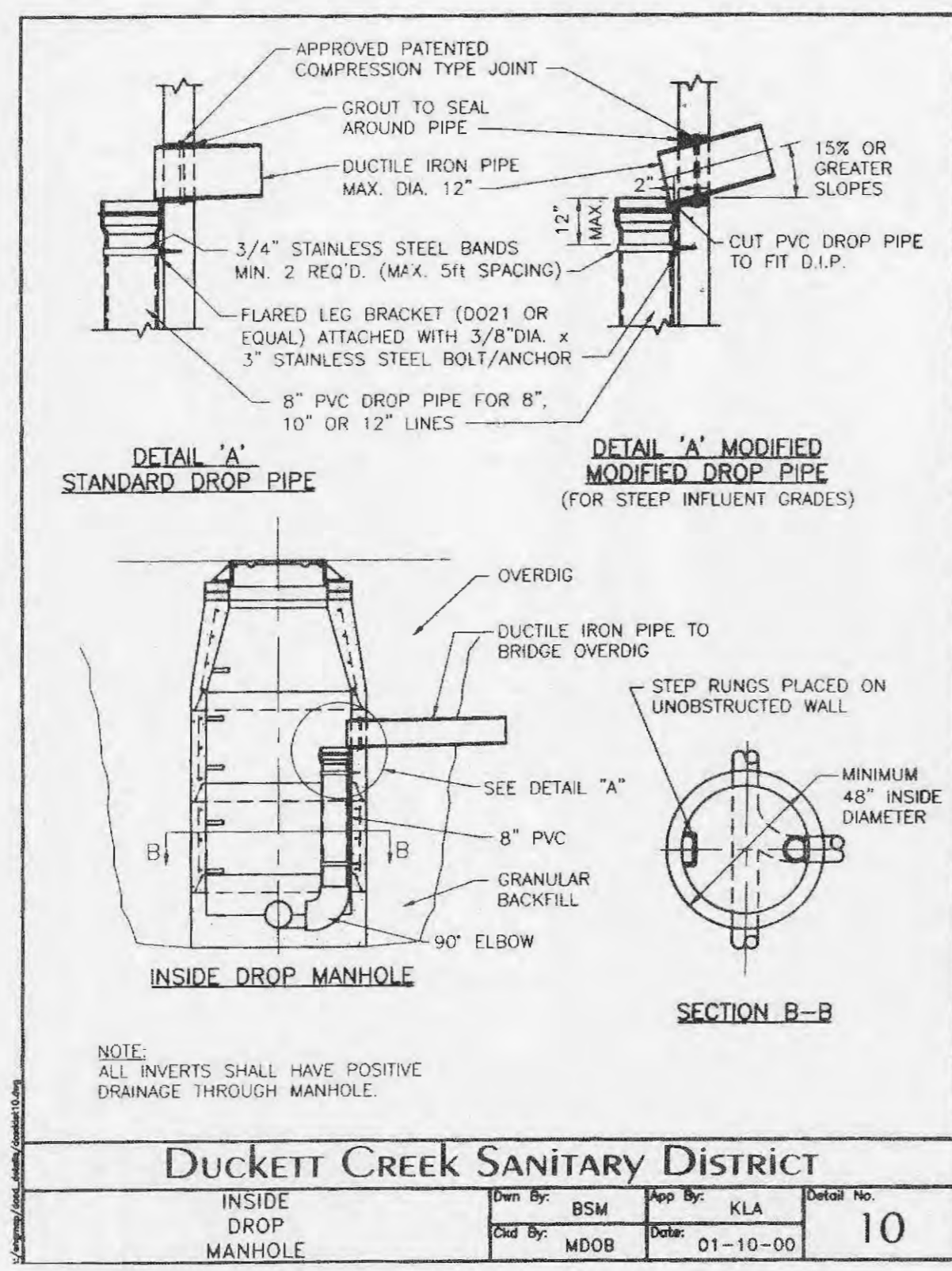
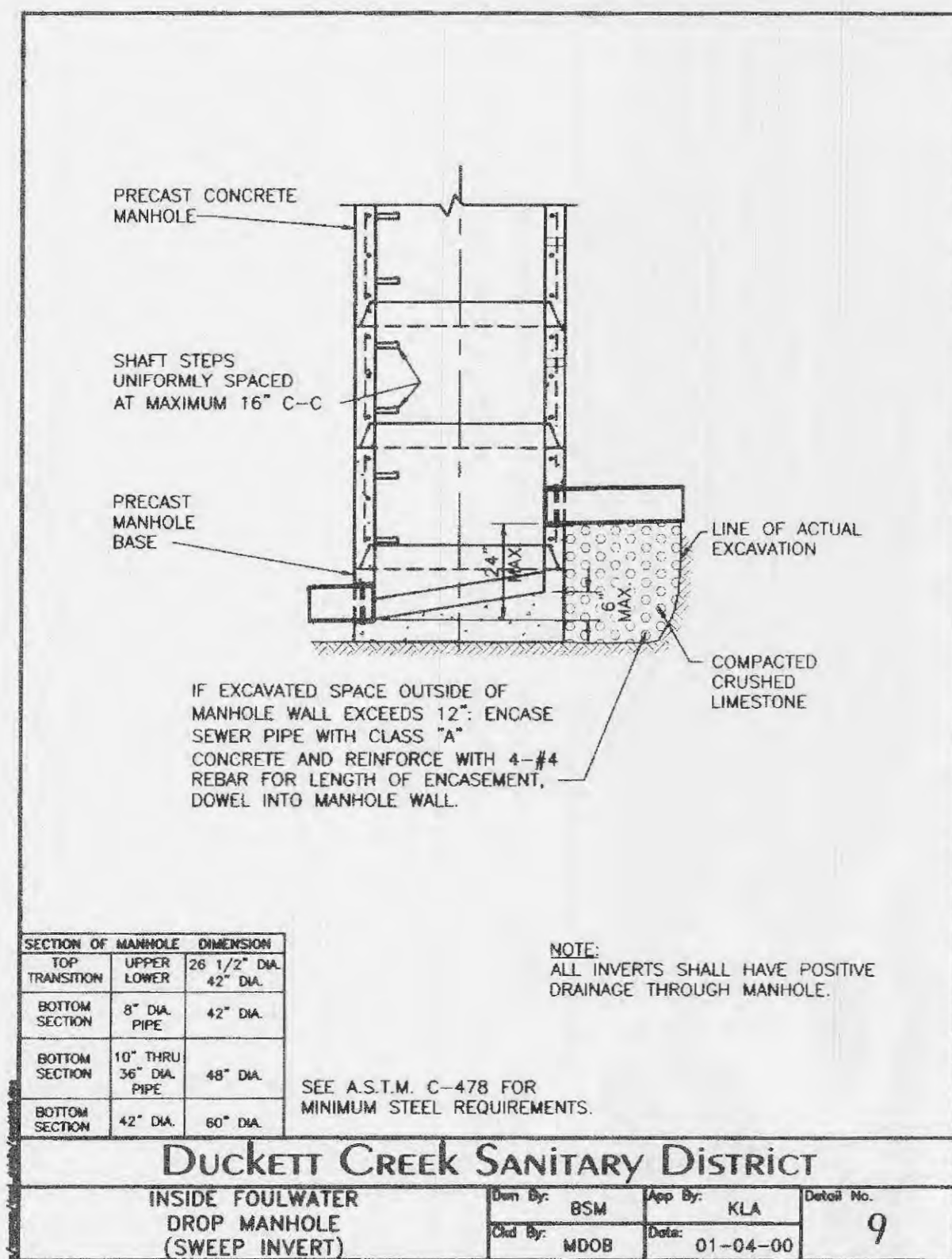
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 PH. (636) 530-9100
 FAX (636) 330-9130
 e-mail: general@stackassoc.com
 Web: www.stackassoc.com

DATE: 10/20/05
 CHECKED BY: G.M.S.
 DATE: 8/22/05
 JOB NUMBER: 204-3319
 SHEET: C7.0

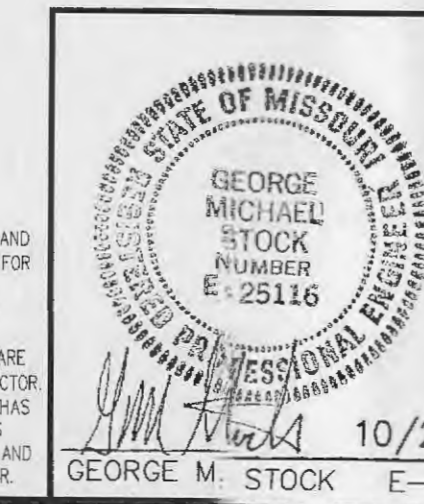


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10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
9/27/05 - REVISED PER MODOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT
SANITARY SEWER DETAILS



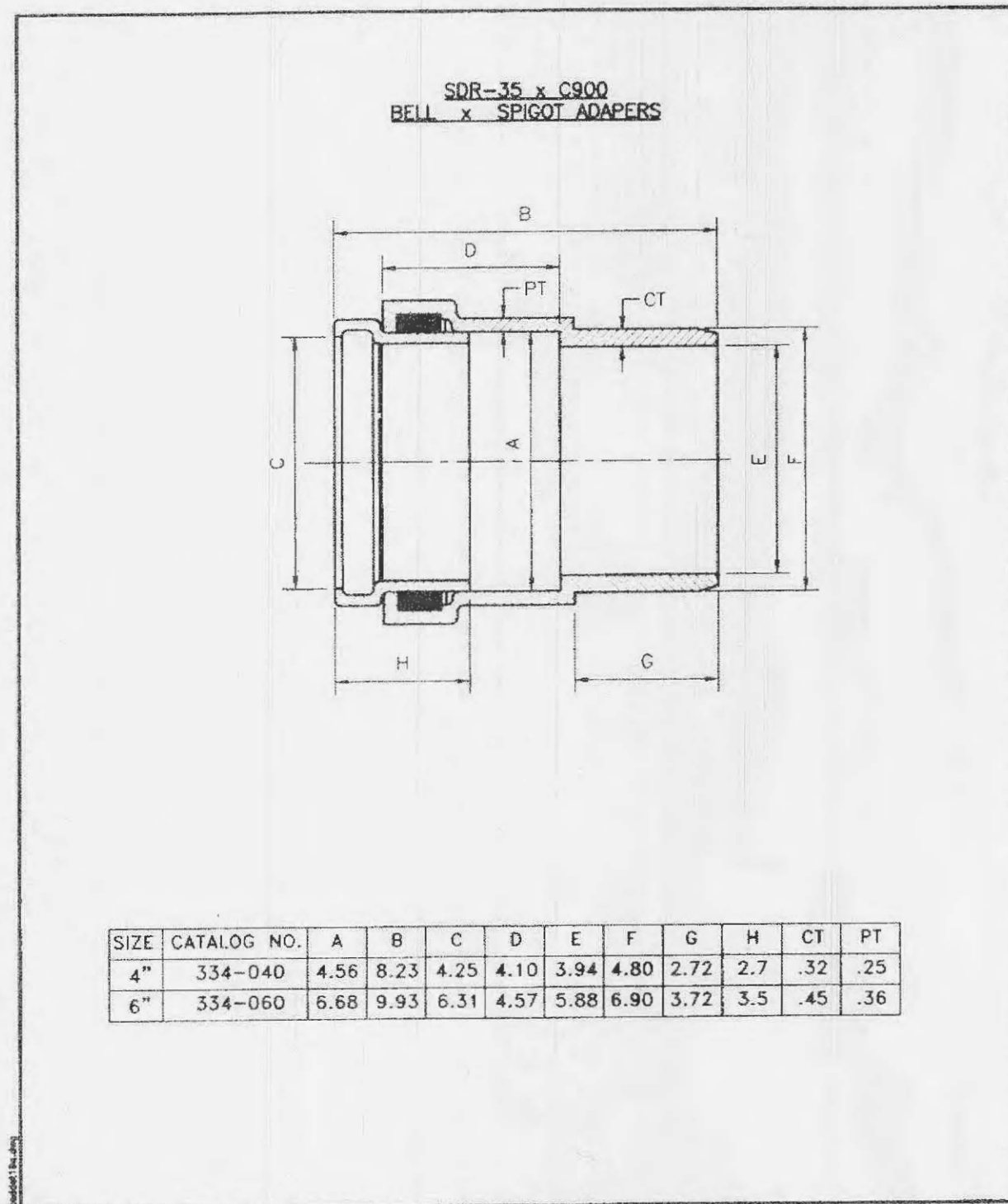
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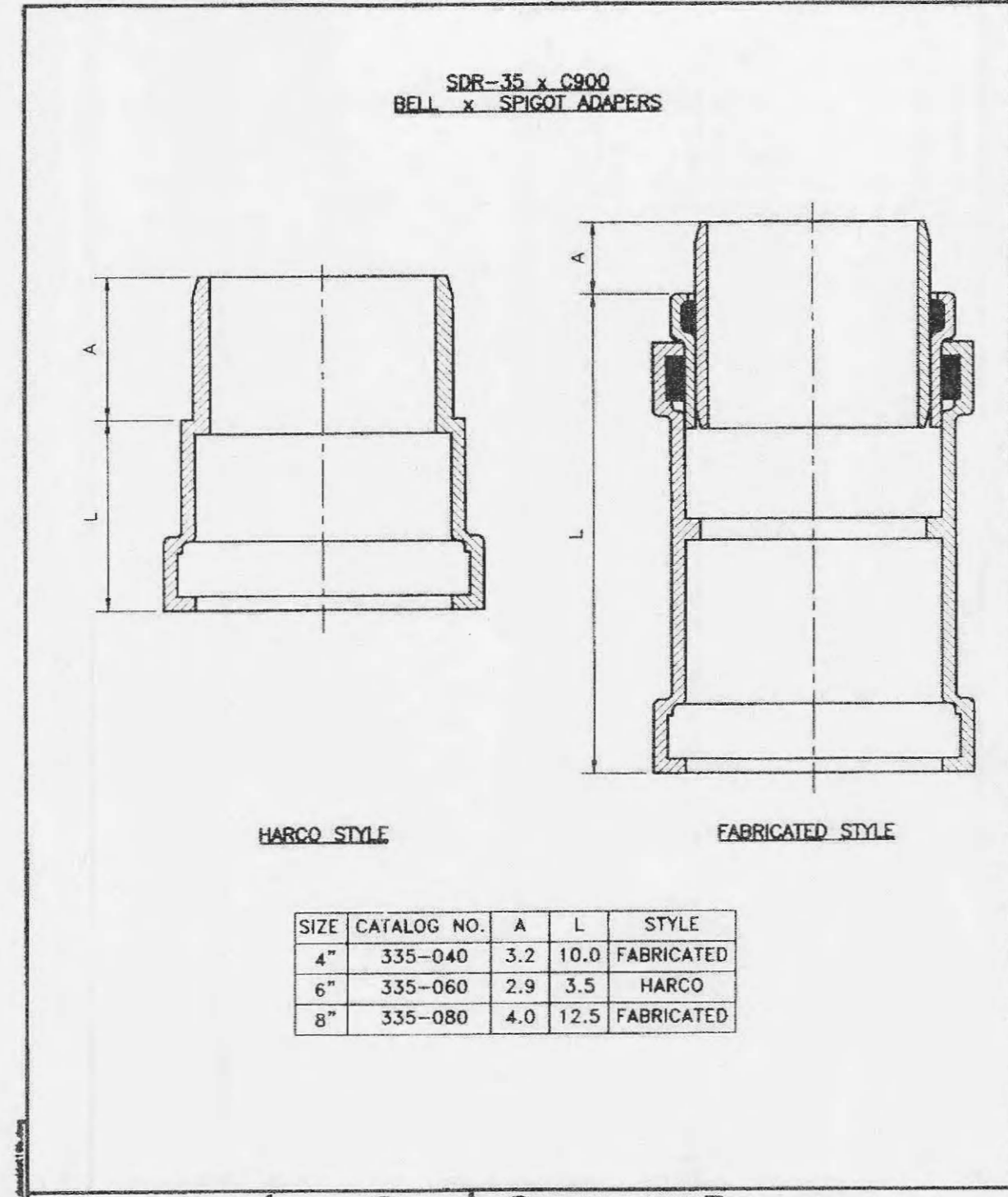
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10/20/05
GEORGE M. STOCK E-25116

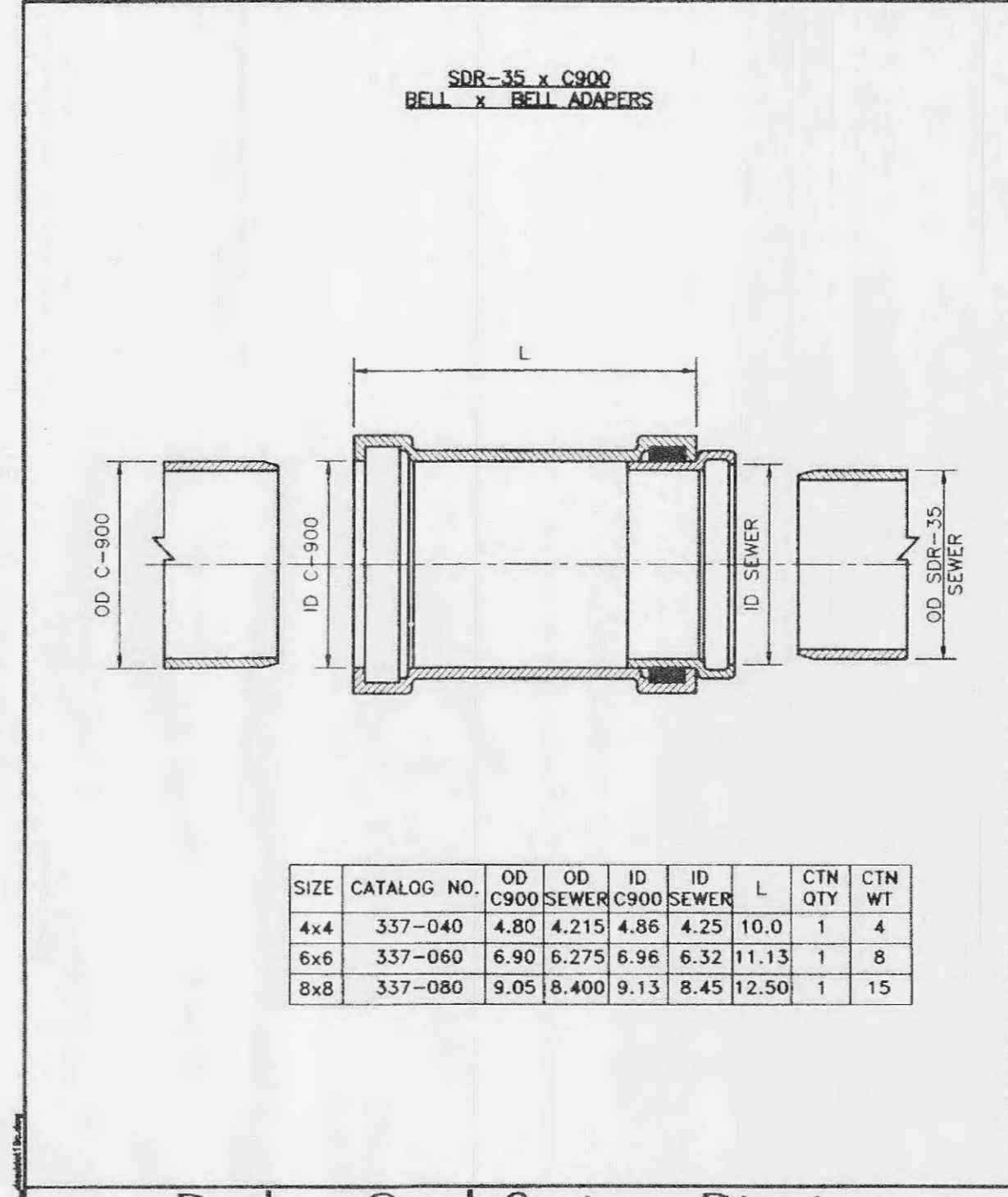
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DATE: 08/22/05
CHECKED BY: G.M.S. 8/22/05
DATE: 8/22/05
JOB NUMBER: 204-3319
SHEET: C7.1



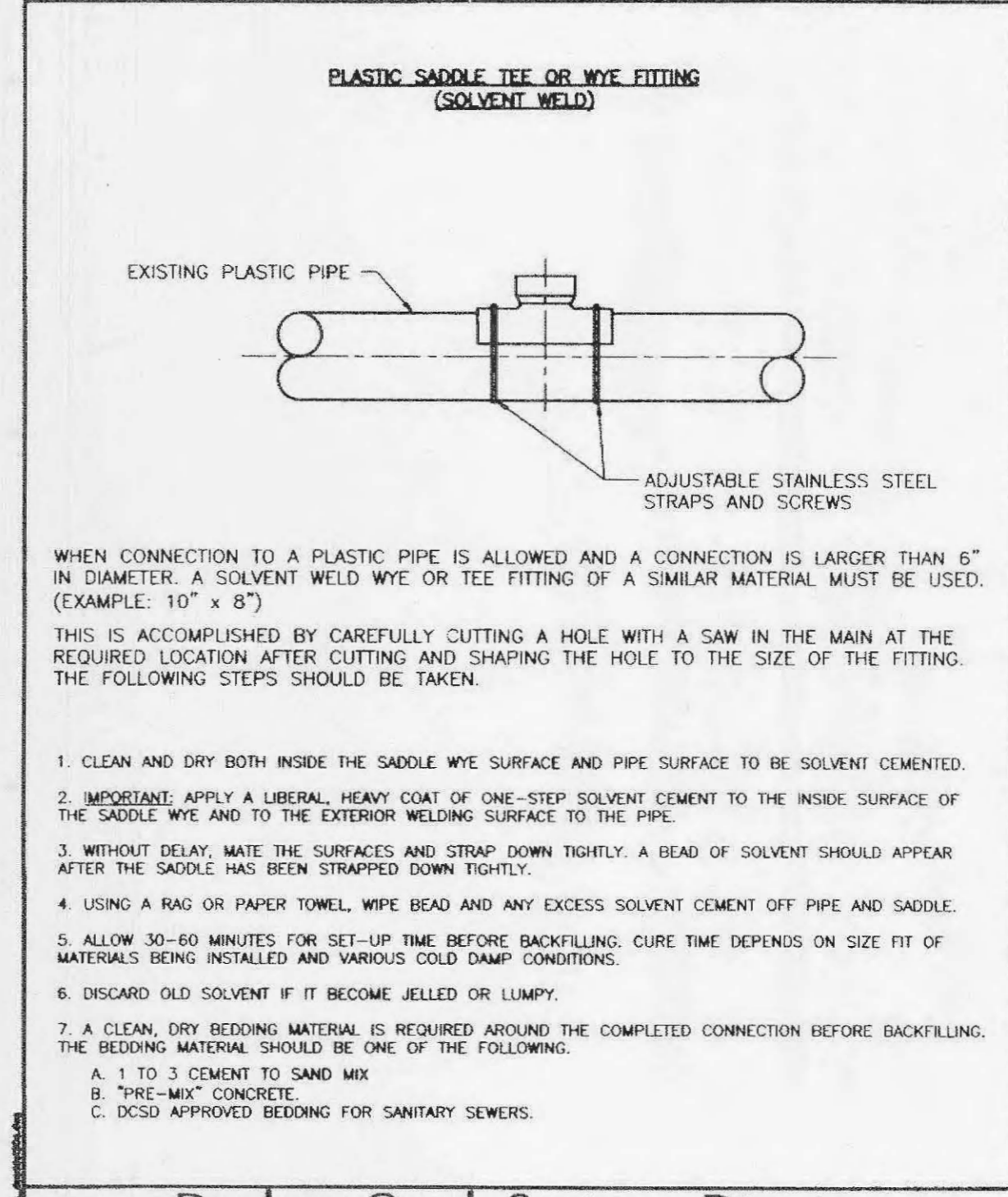
Duckett Creek Sanitary District
SDR-35 x C900 BELL AND SPIGOT ADAPTERS
Des: BSM App: KLA Date: 1-3-01 Detail No. 19A



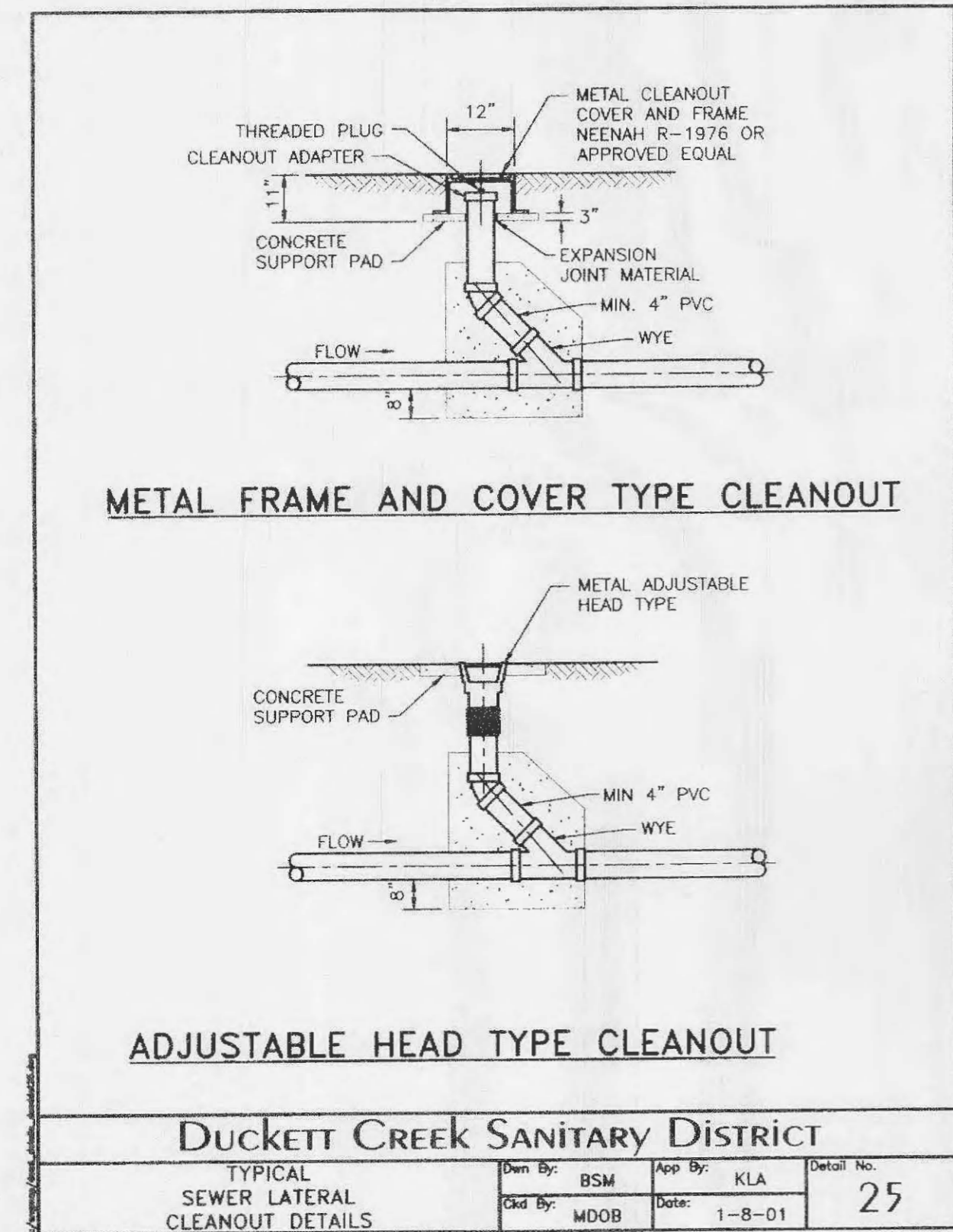
Duckett Creek Sanitary District
SDR-35 x C900 BELL AND SPIGOT SPECIAL 4", 6" & 8" ADAPTERS
Des: BSM App: KLA Date: 1-3-01 Detail No. 19B



Duckett Creek Sanitary District
SDR-35 x C900 BELL AND BELL 4", 6" & 8" ADAPTERS
Des: BSM App: KLA Date: 1-3-01 Detail No. 19C

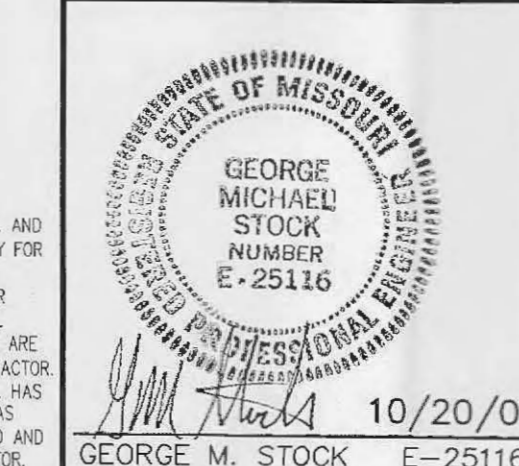


Duckett Creek Sanitary District
8" & LARGER CONNECTION TO PLASTIC MAIN
Des: BSM App: KLA Date: 1-4-01 Detail No. 20A



10/20/05 - REVISED PER REVIEW COMMENTS
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3/27/05 - REVISED PER MDOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT
SANITARY SEWER DETAILS



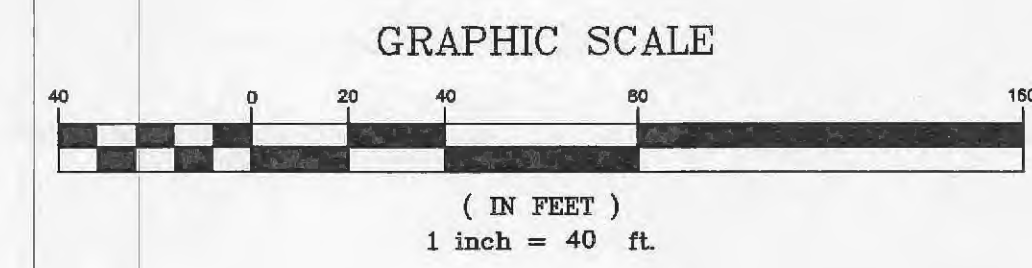
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DATE: 10/20/05
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DATE: 8/22/05
JOB NUMBER: 204-3319
SHEET: C7.2

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"CITIMORTGAGE"
 PROGRESS POINT
 BOOK 38, PG. 310-313
 LOT B
 ZONED HTCD



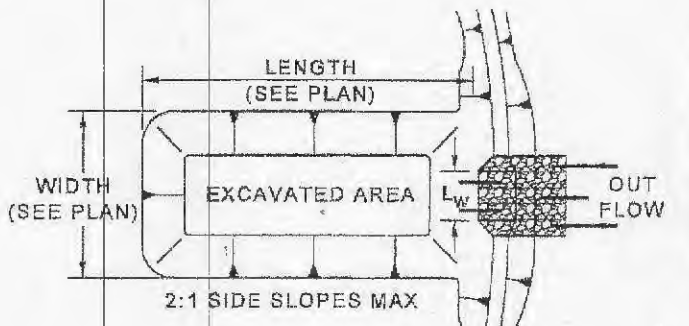
PROGRESS POINT
 BOOK 38, PG. 310-313
 LOT C
 AREA
 989,947 SQ. FT.
 OR
 22.726 ACRES
 N/F
 MOUNTAIN FARM, L.L.C.
 D.B. 2393, PG. 1456
 ZONED HTCD

SEDIMENT BASIN CALCULATION
 TRIBUTARY AREA = .83 Ac.
 0.83 Ac. x 1800 = 1494 c.f.
 BASIN: 20'x50'x2' DEEP
 = 2000 c.f.

SEDIMENT BASIN

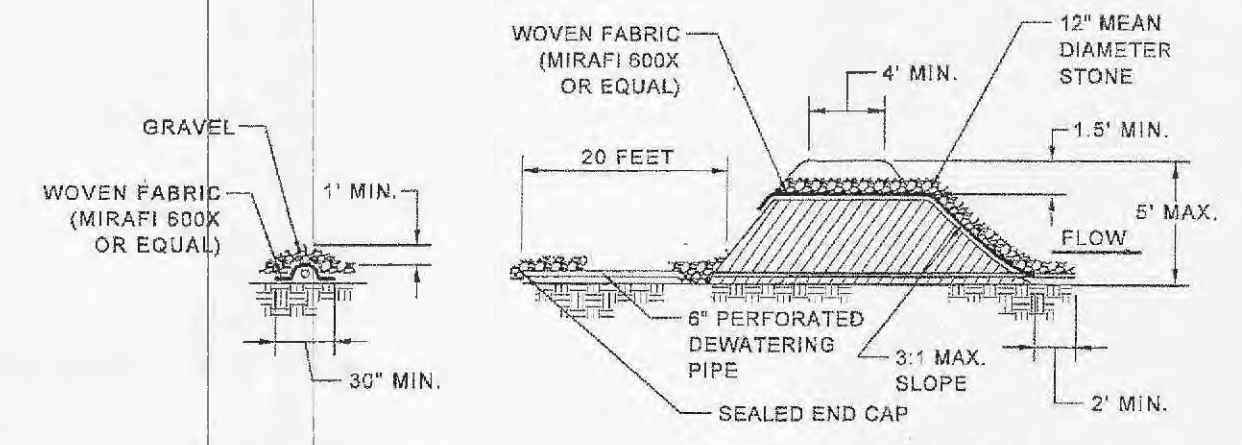
LEGEND

ITEM	SYMBOL
SILT FENCE	— SF —
CONSTRUCTION ENTRANCE	CE
INLET PROTECTION	⊗

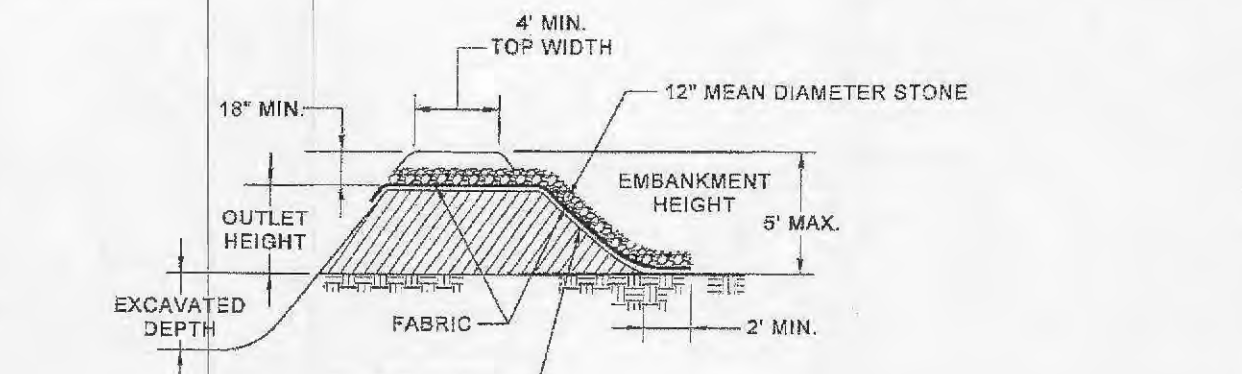


TRIBUTARY AREA (ACRES)	LENGTH OF SPILLWAY WEIR (L _w) (FT.)
0.00 - 1.00	4
1.01 - 2.00	6
2.01 - 3.00	8
3.01 - 4.00	10
4.01 - 5.00	12

PLAN VIEW



DEWATERING PIPE OUTLET PROFILE



ALTERNATE OUTLET PROFILE

SEDIMENT BASIN DETAIL

NOTE: SEDIMENT SHALL BE REMOVED FROM PROPOSED DETENTION POND UPON COMPLETION OF SITE PAVING AND SITE RE-VEGETATION.

NOTE TO CONTRACTOR:

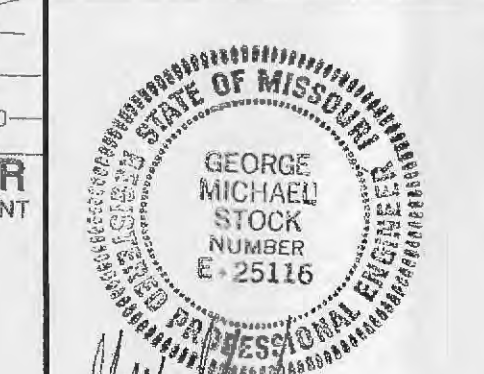
THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF OFALLON AND/OR THE CITY OF WELDON SPRING AND/OR MODOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF OFALLON AND/OR THE CITY OF WELDON SPRING AND/OR MODOT.

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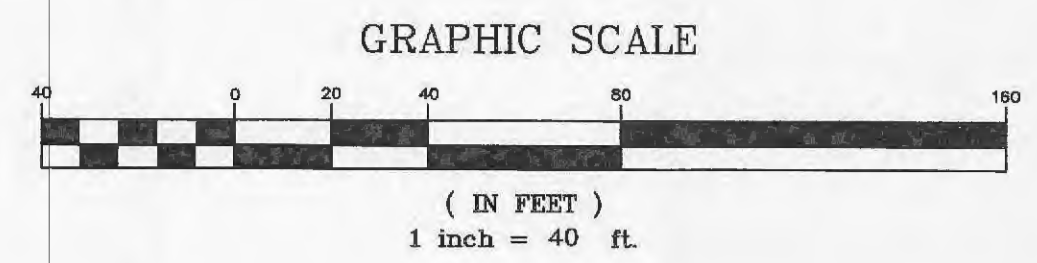
SOAVE AUTOMOTIVE @ WELDON POINT
 EROSION CONTROL PLAN

STOCK & ASSOCIATES
 Consulting Engineers, Inc.

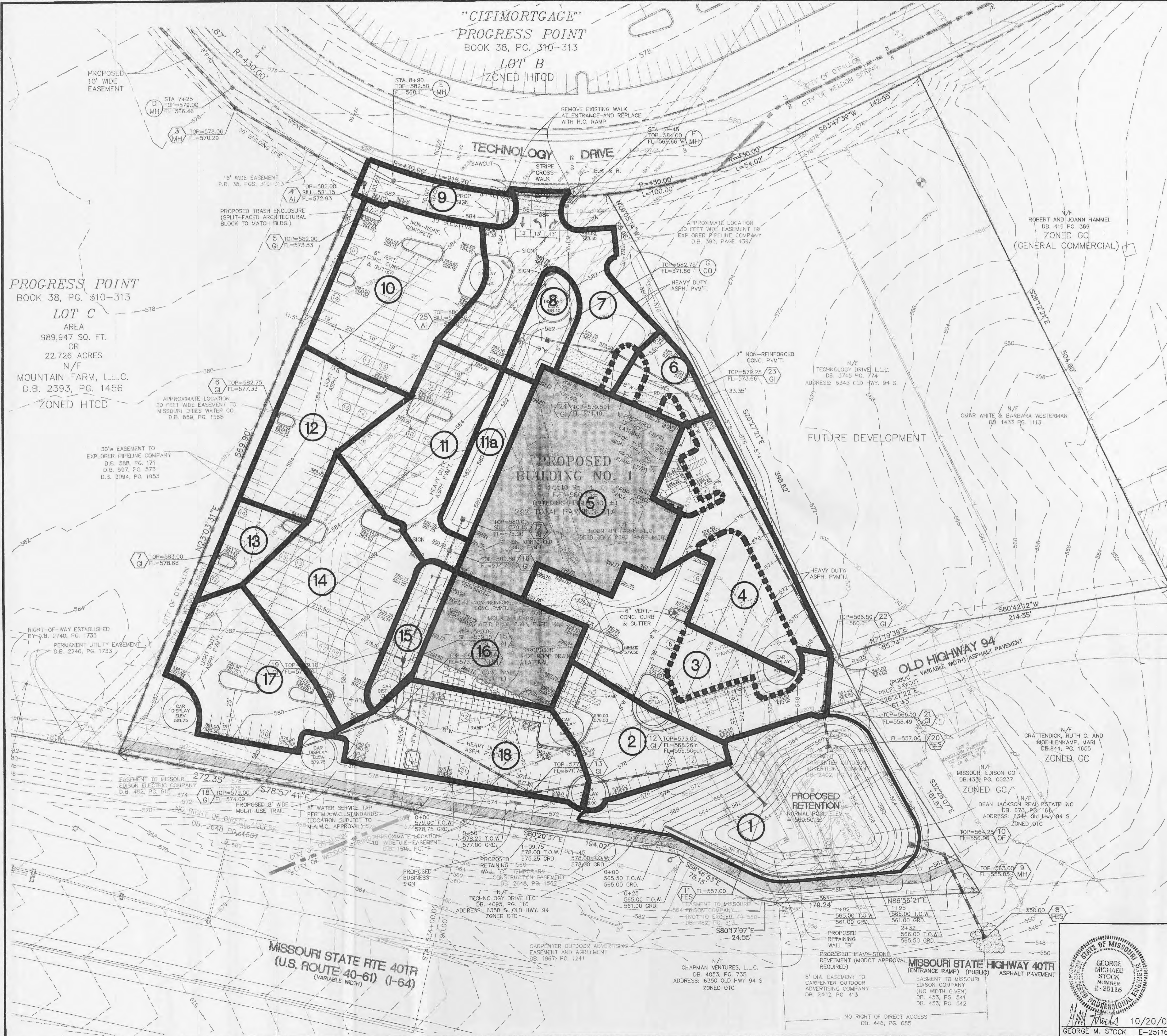
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"CITIMORTGAGE"
 PROGRESS POINT
 BOOK 38, PG. 310-313
 LOT B
 ZONED HTCD



PROGRESS POINT
 BOOK 38, PG. 310-313
 LOT C
 AREA
 989,947 SQ. FT.
 OR
 22.726 ACRES
 N/F
 MOUNTAIN FARM, L.L.C.
 D.B. 2393, PG. 1456
 ZONED HTCD



DRAINAGE AREAS

- 1 0.60 AC. X 1.7=1.02 c.f.s.
- 2 0.23 AC. X 3.54= 0.81 c.f.s.
- 3 0.45 AC. X 3.54= 1.59 c.f.s.
- 4 0.31 AC. X 3.54= 1.10 c.f.s.
0.12 AC. X 1.70= 0.20 c.f.s.
- 5 0.59 A.C. X 4.20= 2.48 c.f.s.
- 6 0.07 AC. X 3.54= 0.25 c.f.s.
0.03 AC. X 1.70= 0.05 c.f.s.
- 7 0.36 AC. X 3.54= 1.27 c.f.s.
- 8 0.09 AC. X 1.70= 0.15 c.f.s.
- 9 0.10 AC. X 1.70= 0.17 c.f.s.
- 10 0.40 AC. X 3.54= 1.42 c.f.s.
- 11 0.32 AC. X 3.54= 1.13 c.f.s.
- 11a 0.11 AC. X 1.70= 0.19 c.f.s.
- 12 0.24 AC. X 3.54= 0.85 c.f.s.
- 13 0.09 AC. X 3.54= 0.32 c.f.s.
- 14 0.44 AC. X 3.54= 1.56 c.f.s.
- 15 0.09 AC. X 3.54= 0.32 c.f.s.
- 16 0.26 AC. X 4.20= 1.09 c.f.s.
- 17 0.30 AC. X 3.54= 1.06 c.f.s.
- 18 0.35 AC. X 3.54= 1.24 c.f.s.

10/20/05 - REVISED PER REVIEW COMMENTS
 10/07/05 - REVISED PER REVIEW/CLIENT COMMENTS
 9/27/05 - REVISED PER MODOT COMMENTS

SOAVE AUTOMOTIVE @ WELDON POINT
 DRAINAGE AREA PLAN

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