# OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DOCUMENTS

# FALCON MARKETPLACE

REVISED SHEETS C7.1-C7.5

## AGENCY CONTACTS

EL PASO COUNTY DEVELOPMENT SERVICES

KARI PARSONS, PROJECT MANAGER/PLANNER II 2880 INTERNATIONAL CIRCLE, SUITE 110

COLORADO SPRINGS, CO 80910 (719) 520-6300

FALCON FIRE DEPARTMENT

TRENT HARWIG, FIRE CHIEF 7030 OLD MERIDIAN ROAD FALCON, CO 80831

(719)495-4050

WOODMEN HILLS METROPOLITAN DISTRICT GENE COZZOLINO, DIRECTOR OF WATER & WASTEWATER

8046 EASTONVILLE ROAD FALCON, CO 80831

(719) 495-2500

WOODMEN HILLS METROPOLITAN DISTRICT

GENE COZZOLINO, DIRECTOR OF WATER & WASTEWATER 8046 EASTONVILLE ROAD

FALCON, CO 8083 (719) 495-2500

MOUNTAIN VIEW ELECTRIC ASSOCIATION

LES ULFERS 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

COLORADO SPRINGS UTILITIES

TODD STURTEVANT 1521 HANCOCK EXPRESSWAY COLORADO SPRINGS, CO 80947

(719) 668-3556

CENTURY LINK <u>TELEPHONE</u>

SALLY KLEIN (719) 636 - 4329

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(LOCATORS) (719) 635-3674

<u>PETROLEUM</u>

DALE STEWART

213 N. UNION BLVD COLORADO SPRINGS, CO 80909

(719) 442-4733

NUSTAR

CHAD RENSLOW 7810 DRENNAN ROAD

COLORADO SPRINGS, CO 80925 (719) 650-2681

WOODMEN ROAD METROPOLITAN DISTRICT

TERRY SCHOOLER

20 BOULDER CRESCENT, SUITE #200

COLORADO SPRINGS, CO 80903

(719) 447-1777

# ESIMATED COST OF TEMPORARY + PERMANENT BMPs INCLUDING INSTALLATION AND MAINTENANCE UNTIL FINAL STABILIZATION (FINAL + INTERIM STAGE)

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Earthwork	78000	CY	\$5.00	\$390,000.00
2	Permanent Seeding	10.4	AC	\$582.00	\$6,052.80
3	Mulching	10.4	AC	\$507.00	\$5,272.80
4	Permanent Erosion Blanket	5900	SY	\$6.00	\$35,400.00
5	Temporary Erosion Blanket	0	SY	\$3.00	\$0.00
6	Vehicle Tracking Control	1	EA	\$1,626.00	\$1,626.00
7	Safety Fence	5000	LF	\$3.00	\$15,000.00
8	Silt Fence	4900	LF	\$4.00	\$19,600.00
9	Temporary Seeding	21.8	AC	\$485.00	\$10,573.00
10	Temporary Mulch	21.8	AC	\$507.00	\$11,052.60
11	Erosion Bales	31	EA	\$21.00	\$651.00
12	Erosion Logs	0	LF	\$6.00	\$0.00
13	Rock Ditch Checks	0	EA	\$0.00	\$0.00
14	Inlet Protection	14	EA	\$153.00	\$2,142.00
15	Sediment Basin	4	EA	\$1,625.00	\$6,500.00
16	Concrete Washout Basin	1	EA	\$776.00	\$776.00
17	Clay Liner - Pond SR4	6250	CY	\$3.00	\$18,750.00
	TOTAL				\$523,396.20

SE 1/4 OF THE SE 1/4 OF SECTION 1, T13S, R65W OF THE 6TH P.M. 11680 E. WOODMEN ROAD FALCON, COLORADO



# VICINITY MAP NOT TO SCALE

# BENCHMARK

ELEVATIONS ARE BASED ON COLORADO SPRINGS UTILITIES FACILITIES INFORMATION SYSTEM (FIMS) "BLT 167", A 2" ALUMINUM CAP IN CONCRETE LOCATED ON AN ELECTRIC TRANSFORMER PAD AT THE SOUTHEAST CORNER OF WOODMEN ROAD AND MERIDIAN ROAD, WITH AN ELEVATION OF 6873.18 (NGVD 29).

# LEGAL DESCRIPTION

THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOGETHER WITH THAT PORTION OF BLOCK 1. TOWN OF FALCON. LYING WITHIN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO.

EXCEPT THOSE PORTIONS CONVEYED TO WOODMEN ROAD METROPOLITAN DISTRICT BY WARRANTY DEED RECORDED APRIL 19, 2004 AT RECEPTION NO. 204062427 AND PERSONAL REPRESENTATIVE'S DEED RECORDED SEPTEMBER 7, 2007 AT RECEPTION NO. 207116129, EL PASO COUNTY, COLORADO RECORDS.

# FLOODPLAIN STATEMENT

THE EFFECTIVE FLOODPLAIN ZONE A LIMITS ARE DEFINED ON THE FIRM FOR EL PASO COUNTY. COLORADO AND UNINCORPORATED AREAS, MAP NUMBER 8041CO575F, EFFECTIVE DATE MARCH 17. 1997. FEMA ISSUED PRELIMINARY FIRM MAP 08041C0553G DATED JULY 29, 2015 TO REFLECT LIMITS MODIFIED BY LOMR CASE NO. 12-08-0579P (FEBRUARY 28, 2013).

A CLOMR TO MODIFY THE FLOODPLAIN HAS BEEN SUBMITTED AND APPROVED BY FEMA, CASE NO. 17-08-0074R (MAY 26, 2017).

# **TIMING**

ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING: FALL 2018-SUMMER 2019

TOTAL AREA OF THE SITE TO BE CLEARED, EXCAVATED OR GRADED: APPROXIMATELY 36.4 ACRES RECEIVING WATERS

FALCON WATERSHED - UNNAMED TRIBUTARY TO UPPER BLACK SQUIRREL CREEK

HYDROLOGIC TYPE A: BLAKELAND LOAMY SAND (NO. 8) AND BLAKELAND-FLUVAQUENTIC HAPLAQUOLIS (NO. 9)

1. Documentation of all easements necessary for offsite construction shall be provided prior to issuance of a construction permit. Provide updated GEC plan sheets showing the easements when available.

2. The clay liner proposed for Pond SR4 construction is not approved at this time. Provide rationale that other impermeable lining methods are not practicable, including rubber lining. Placement of any liner requires separate written approval after PCD staff receipt of this additional information as well as project-specific liner specifications, signed and stamped by a Colorado PE.

3. The riprap spillways proposed for Pond SR4 construction are not approved at this time. Provide an analysis for the use of riprap, geocellular products and articulated concrete block products. Written notification from PCD staff is required prior to installation of the spillway protection.

regarding outlet grate/trash rack design is required for verification of velocities. 5. Additional information is required on how groundwater will be handled during pond construction. Provide additional geotechnical study/potholing information on groundwater levels and the geotechnical engineer's

4. Outlet structure construction requires separate written notification from PCD staff. Additional information

concurrence with these CDs when available. 6. Additional requirements for the inflow pipe from the northwest (class of pipe, anchoring/support, and watertight joints) may apply. Construction of this pipe and appurtenant items shall not begin without written County approval.

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C7.5	POND #1 (SR4) DETAILS		

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

# DESIGN ENGINEER'S STATEMENT

OPEN CHANNEL DETAILS STORM SEWER DETAILS

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO CRITERIA ESTABLISHED BY THE COUNTY FOR THE DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS

De Menel	9-27-18
TIM D. MCCONNELL P.E.# 33797	DATE

## **OWNER'S STATEMENT**

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION

CONTROL FLAN.	BAP	9-27-18
BEN HUMMEL		DATE

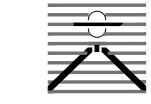
## EL PASO COUNTY

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

JENNIFER IRVINE, P.E. COUNTY ENGINEER

Approved with conditions as noted above\*\* 10/10/2018 3:30:30 PM PREPARED BY:



DREXEL, BARRELL & CC Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 809 CONTACT: TIM D. McCONNELL, P (719)260-0887

BOULDER • COLORADO SPRINGS

CLIENT:

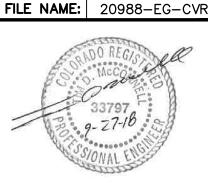
**HUMMEL INVESTMENTS. LLC** 

8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

RK

**ISSUE** DATE 1ST SUBMITTAL 6-20-17 ESUBMITTAL 9-6-18 DESIGNED BY: DRAWN BY: KGV CHECKED BY:



PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

DRAWING SCALE: HORIZONTAL: N/A VERTICAL: N/A

COVER SHEET

PROJECT NO. 20988-00CSCV DRAWING NO.

EL PASO COUNTY FILE NO: SP-17-001

SP-17-001 SHEET: 1 OF 27

### STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.
- 2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- 3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- 4. ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPS AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY INSPECTIONS STAFF.
- 5. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPS SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
- 6. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.
- 7. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPS IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP).
- 8. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPS AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.
- 9. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- 10. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
- 11. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- 12. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
- 13. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- 14. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 15. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 16. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- 17. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S
- 18. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE
- 19. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- 20. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
- 21. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- 22. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 23. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- 24. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- 25. THIS PROPERTY IS SUBJECT TO THE FINDINGS, SUMMARY, AND CONCLUSIONS OF THE PRELIMINARY GEOTECHNICAL INVESTIGATION BY GROUND ENGINEERING, DATED AUGUST 25, 2015, WITH ADDENDA #1, DATED MARCH 17, 2017.
- 26. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE. THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP). OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION WQCD - PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246-1530 ATTN:PERMITS UNIT

### GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE EL PASO COUNTY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AND REVISIONS THERETO, EXCEPT WHERE OTHERWISE NOTED ON THE PROJECT PLANS AND THE PROJECT SPECIAL PROVISIONS.
- PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL SUBMIT IN WRITING A DETAILED PLAN OF OPERATIONS AND SCHEDULE OF COMPLETION.
- THE CONTRACTOR SHALL PROVIDE EL PASO COUNTY AND THE 911 OPERATOR WITH THE NAME AND PHONE NUMBER OF THEIR REPRESENTATIVE TO BE CONTACTED DURING WORKING AND NON-WORKING HOURS AS NECESSARY.
- A QUALIFIED SUPERINTENDENT, WHO IS ACCEPTABLE TO THE OWNER, SHALL BE APPOINTED TO SUPERVISE THE WORK UNTIL COMPLETION. THE SUPERINTENDENT SHALL HAVE FULL AUTHORITY TO ACT ON BEHALF OF THE CONTRACTOR, AND ALL DIRECTIONS GIVEN TO THE SUPERINTENDENT SHALL BE CONSIDERED GIVEN TO THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AT HIS OWN EXPENSE, TO COMPLETE THE CONSTRUCTION CONTAINED ON THESE DOCUMENTS AND SHALL COMPLY WITH ALL PERTINENT LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR SHALL MAINTAIN AN "AS CONSTRUCTED" RECORD OF ALL ROADWAY AND UTILITY CONSTRUCTION AND SHALL FURNISH A COPY OF SAME TO EL PASO COUNTY AND THE ENGINEER UPON COMPLETION OF CONSTRUCTION.
- THE OWNER WILL PERFORM QUALITY ASSURANCE TESTING OF SUBGRADE AND MATERIALS. QUALITY CONTROL TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

## SITE PREPARATION

- CONTRACTOR SHALL FIELD VERIFY PROFILE GRADES AND ADJUST GRADES WHERE DIRECTED BY THE FIELD ENGINEER.
- IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE FIELD ENGINEER IMMEDIATELY SO THAT APPROPRIATE ACTION CAN BE TAKEN BY THE OWNER.
- PRIOR TO STARTING CONSTRUCTION, PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM EL PASO COUNTY PERSONNEL. MAINTAIN ONE LANE OF TRAFFIC MOVEMENT IN EACH DIRECTION DURING CONSTRUCTION UNLESS OTHER ARRANGEMENTS (ONE WAY, DETOUR, ETC.) ARE MADE WITH EL PASO COUNTY DURING TRAFFIC CONTROL PLAN PREPARATION.
- REMOVAL OF ALL PERMANENT SIGNAGE FROM WITHIN THE AREA OF WORK AND DELIVERY TO EL PASO COUNTY'S MAINTENANCE YARD AT 3275 AKERS DRIVE, COLORADO SPRINGS, COLORADO. ASPHALT REMOVAL SHALL INCLUDE SAW CUTTING, REMOVAL, AND DELIVERY OF UNUSED REMOVED ASPHALT AND MILLINGS TO EL PASO COUNTY DISPATCH 719-520-6891 TO COORDINATE DELIVERY OF THE MATERIAL DELIVERY WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- 5. THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING SIGNS OR PAVEMENT MARKINGS DURING PROJECT WITHOUT SIGNED AUTHORIZATION OF THE EL PASO COUNTY REPRESENTATIVE.
- TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH COLORADO DEPARTMENT OF TRANSPORTATION M & S STANDARD 630, AND THE MUTCD. ALL ACCESSES, BOTH PRIVATE AND COMMERCIAL ARE TO BE MAINTAINED AND REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLAN TO COUNTY BEFORE BEGINNING WORK AND PRIOR TO BEGINNING A NEW PHASE OF CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EL PASO COUNTY AND OTHERS MONUMENTS. INCLUDING PROPERTY CORNERS WITHIN THE PROJECT LIMITS. ANY MONUMENT WHICH IS DISTURBED OR DESTROYED BY THE CONTRACTOR WILL BE RESTORED IN ACCORDANCE WITH CDOT STANDARDS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSTALL NEW MONUMENTS AS INDICATED ON THE ROW PLANS. ALL MONUMENTS ARE PROPERTY CORNERS WILL BE ADJUSTED TO FINAL GRADE PER CDOT STANDARDS.
- THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING.
- EXISTING TREES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. TREES SHALL NOT BE REMOVED UNLESS AUTHORIZED BY THE OWNER/FIELD ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY DISPOSING OF ALL REMOVALS OFF THE PROJECT SITE. COST FOR DISPOSAL OF ALL REMOVED ITEMS SHALL BE INCLUDED IN THE WORK.

## CLAY LINER NOTES:

- DESIGN SPECIFICATIONS ARE PROVIDED IN THE COLORADO DEPARTMENT OF NATURAL RESOURCES -LINED PIT GUIDE, DATED SEPTEMBER 2000. THESE GUIDELINES ARE GENERAL, AND FINAL ACCEPTANCE OF MATERIAL SHALL BE APPROVED PRIOR TO USE.
- EXCAVATIONS SHALL BE GRADED AND PROPERLY MAINTAINED TO PROVIDE ADEQUATE DRAINAGE AT TALL TIMES. WORK SHALL BE SUSPENDED WHEN THE SITE IS OVFP' MUDDY. OR OTHERWISE UNSUITABLE FOR PROPER MAINTENANCE. IN EXCAVATIONS TIME RESIDED WHEN THE SITE IS OVER AT TIME REPLACED ON SLOPES STEEPER THAN 3H:1V, HORIZONTAL OVER AT THIS TIME RELIGIOUS THE SLOPE TO ALLOW FILL TO BE PLACED IN HORIZONTAL APPROVED AT THIS TIME RELIGIOUS TO ALLOW FILL TO BE PLACED IN HORIZONTAL APPROVED AND MATERIAL SHALL BE CONTINUOUSLY BENCHED AND KEYED INTO THE CLAY LINER NOT A MINIMUM OF 2 FEET.
- COMPACT THE SOILS, INCLUDING THE LINER MATERIAL TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D 698) AT A MOISTURE CONTENT BETWEEN 1 TO 3 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT.
- SOIL FILL LINER SHOULD BE PLACED AND COMPACTED TO ACHIEVE A COEFFICIENT OF PERMEABILITY OF LESS THAN 1X10-8 CM/SEC.

### **UTILITY**

- ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES OR VARIATION IN UTILITY LOCATION FROM THAT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE FIELD ENGINEER AND RESOLVED PRIOR TO BEGINNING CONSTRUCTION IN ANY AREA. UTILITY LOCATIONS CAN BE COORDINATED THROUGH CENTRAL LOCATING AT 1-800-022-1987. ANY DAMAGE OCCURS TO THESE UTILITIES DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE THE UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR ANY UTILITIES DISRUPTED BY THE CONSTRUCTION AND ALL EXPENSES INCURRED FOR REPAIR.
- UTILITY RELOCATIONS SHALL BE IDENTIFIED, DESIGNED AND PERFORMED BY THE UTILITY OWNER, OR THEIR DESIGNATED CONTRACTOR. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY PROVIDERS FOR UTILITY RELOCATION AND REPLACEMENT.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 3 WEEKS IN ADVANCE OF THE ACTUAL STARTING DATE OF CONSTRUCTION. THE CONTRACTOR SHALL USE CAUTION WORKING OVER AND AROUND ALL UTILITY LINES. UTILITY INFORMATION AS SHOWN ON PLANS IS PLOTTED FROM THE BEST AVAILABLE INFORMATION, AND THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION. UTILITIES HAVE NOT BEEN FIELD VERIFIED. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL OTHER NECESSARY UTILITIES FOR LOCATIONS PRIOR TO ANY DIGGING. CONTRACTOR IS ALSO RESPONSIBLE FOR COORDINATING ANY UTILITY RELOCATIONS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF OTHER WORK.
- THE CONTRACTOR SHALL ADJUST ANY VALVES OR MANHOLES OF EXISTING UTILITIES NOT TO BE
- CONSTRUCTION AROUND UNDERGROUND FACILITIES. IT IS THE CONSTRUCTION CONTRACTOR'S
- ALL PIPES INSTALLED ON THE PROJECT SHALL BE PAID FOR "COMPLETE IN PLACE". TRENCH

### EARTHWORK

- COMPACTION OF SUBGRADE SHALL MEET THE REQUIREMENT OF 95% MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-99. SUB-GRADE SHALL BE PROOF ROLLED IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS. PROOF ROLLING WILL NOT BE PAID FOR SEPARATELY BUT
- COMPACTION OF BASE FOR CUTS AND FILLS AND DISPOSAL OF UNUSABLE OR EXCESS MATERIAL WILL BE CONSIDERED INCIDENTAL TO UNCLASSIFIED EXCAVATION PAY ITEM AND SHALL NOT BE PAID FOR
- PRIOR TO PLACING NEW PAVEMENT SECTIONS, THE SUBGRADE SHALL BE RECONDITIONED IN ACCORDANCE WITH SECTION 306 OF THE CDOT STANDARD SPECIFICATIONS. THE RECONDITIONED SURFACE SHALL BE PROOF-ROLLED WITH A HEAVY LOADED PNUEMATIC-TIRED VEHICLE HAVING A SINGLE AXLE WEIGHT OF AT LEAST 18 KIPS. AREAS WHICH DEFORM UNDER HEAVY WHEFL LOADS. SHALL BE REMOVED AND REPLACED TO ACHIEVE A STABLE SUBGRADE PRIOR TO PAVING. PROOF

\_\_\_\_

GROUNDWATER MITIGATION MEASURES FOR POND SR4 WILL CONSIST OF INSTALLATION OF A 12-INCH THICK IMPERVIOUS CLAY LINER, TO RESOLVE THE POTENTIAL FOR GROUNDWATER SEEPAGE. LINER SPECIFICATIONS WILL BE BASED ON THE COLORADO DEPARTMENT OF NATURAL RESOURCES SPECIFICATIONS.

- THE SIZE AND LOCATION OF ALL EXISTING UTILITIES AS KNOWN TO THE ENGINEER HAVE BEEN NOTED ON THE PLANS FOR INFORMATION AND GUIDANCE OF THE CONTRACTOR. UTILITY LOCATIONS ARE ONLY APPROXIMATE AS PROVIDED BY THE VARIOUS UTILITY COMPANIES. ALL UTILITIES MAY NOT BE SHOWN THE CONTRACTOR SHALL PROTECT ALL EXISTING AND NEW UTILITIES IN THE VICINITY OF HIS WORK. IF

- RELOCATED TO THE PROPOSED GRADE. THE COST SHALL BE INCLUDED IN THE PRICE OF THE WORK.
- A REPRESENTATIVE OF EL PASO COUNTY IS REQUIRED TO BE ON SITE DURING EXCAVATION AND RESPONSIBILITY TO NOTIFY EL PASO COUNTY 48 HOURS PRIOR TO CONSTRUCTION.
- EXCAVATION, BEDDING, BACKFILL, ECT. WILL NOT BE PAID FOR SEPARATELY

- SHALL BE INCLUDED IN THE WORK.
- SEPARATELY.
- ROLLING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
- DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS: FULL DEPTH OF ALL EMBANKMENTS \_\_\_\_

BASE OF CUTS AND FILL - 1.00 FOOT

DESIGNED BY: TDM DRAWN BY: GES CHECKED BY: TDM FILE NAME: | 20988-EG-NTS

**ISSUE** 

IST SUBMITTAL

RESUBMITTAL

GRADING, STRUCTION

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DATE

6-20-17

9-6-18

PREPARED BY:

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CONTACT: TIM D. McCONNELL, P.E

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CLIENT:

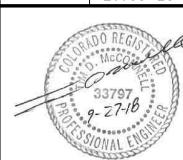
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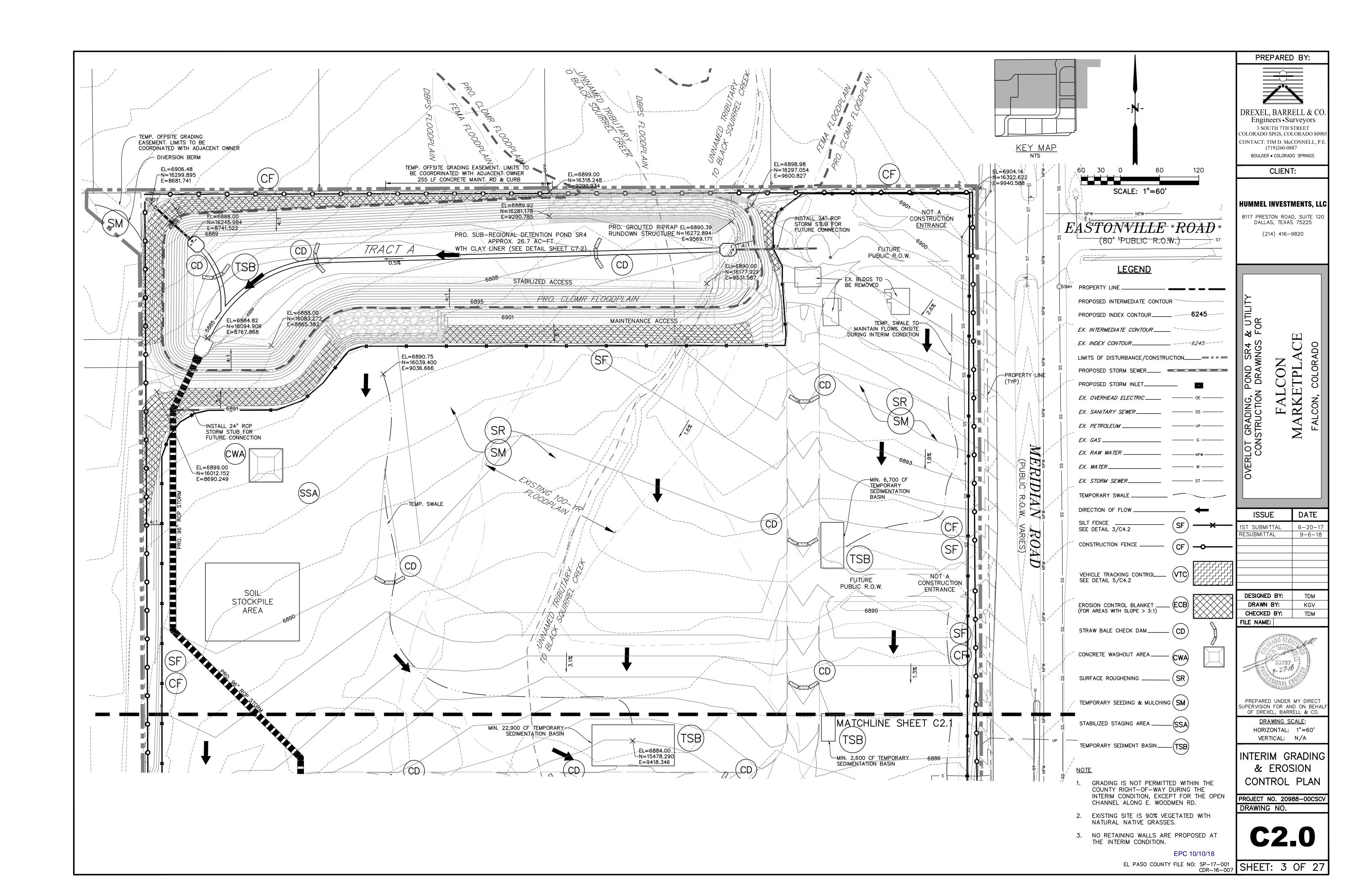
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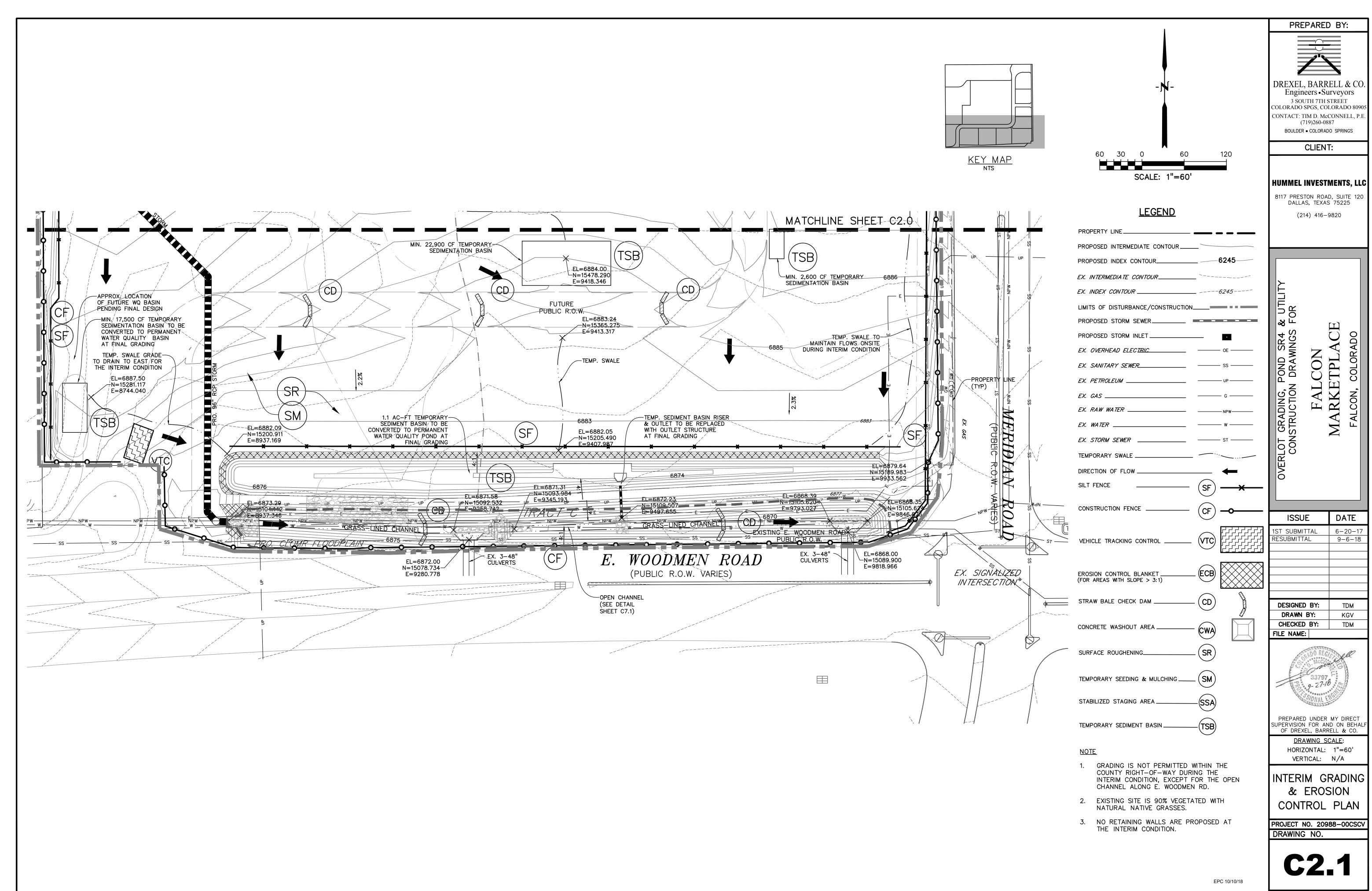
> > NOTES

PROJECT NO. 20988-00CSCV DRAWING NO.

EPC 10/10/18 EL PASO COUNTY FILE NO: SP-17-001

SP-17-001 SHEET: 2 OF 27





EL PASO COUNTY FILE NO: SP-17-001 SHEET: 4 OF 27

TRACKING OR

FURROWS 2" TO 4" DEEP - WITH 6" MAXIMUM SPACING

PARALLEL TO CONTOURS

. SURFACE ROUGHENING

ROUGHENED ROWS SHALL BE 4" TO 6" DEEP WITH 6" MAXIMUM SPACING PARALLEL

SR-2. SURFACE ROUGHENING

FOR LOW SLOPES (LESS THAN 3:1)

FOR STEEP SLOPES (3:1 OR STEEPER)

TS/PS-3

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

### Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species <sup>a</sup> (Common name)	Growth Season	Pounds of Pure Live Seed (PLS)/acre <sup>c</sup>	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	1/2
5. Millet	Warm	3 - 15	1/2 - 3/4
6. Sudangrass	Warm	5-10	1/2 - 3/4
7. Sorghum	Warm	5–10	1/2 - 3/4
8. Winter wheat	Cool	20-35	1 - 2
9. Winter barley	Cool	20–35	1 - 2
10. Winter rye	Cool	20-35	1 - 2
11. Triticale	Cool	25-40	1 - 2

Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months. Seeding rates should be doubled if seed is broadcast, or increased by 50

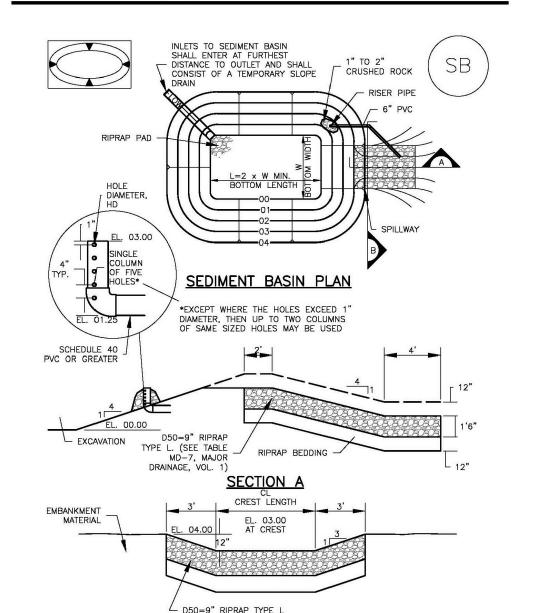
Urban Storm Drainage Criteria Manual Volume 3

percent if done using a Brillion Drill or by hydraulic seeding.

# Urban Drainage and Flood Control District

November 2010

**Sediment Basin (SB)** 



Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

RECOMMENDED PERMANENT SEEDING MIX: APPLY AT 25 POUNDS OF PURE LIVE SEED (PLS) PER ACRE AND A PLANTING DEPTH OF 1 TO 2 INCHES.

SHARP'S 2011 DRYLAND PASTURE MIX					
SPECIES - VARIETY	LOT #	% OF MIX	PURITY %	GERM %	ORGIN
PUBESCENT WHEATGRASS, LUNA	BG3266-9	25.00%	94.81%	91.00%	WY
INTERMEDIATE WHEATGRASS, RUSH	BG3237-8	20.00%	98.97%	95.00%	WY
SMOOTH BROME, LINCOLN	YYY-3058	20.00%	94.72%	85.00%	KS
TETRAPLOID PER RYE, FULL THROTTLE	L145-8-P23	15.00%	96.77%	90.00%	OR
ORCHARDGRASS, PROFILE	B1-9-54	15.00%	94.42%	96.00%	OR
BLUEBUNCH WHEATGRASS, SECAR	BG3248-9	5.00%	98.79%	91.00%	WY
		100.00%			

## **MULCHING NOTES**

INSTALLATION REQUIREMENTS 1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED

WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED. 4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS

3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN

5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING

MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A

MAINTENANCE REQUIREMENTS

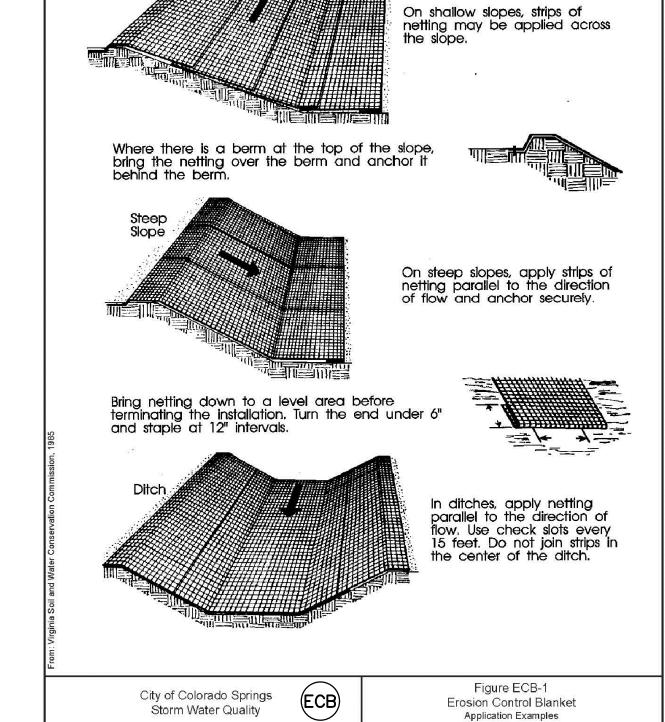
2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

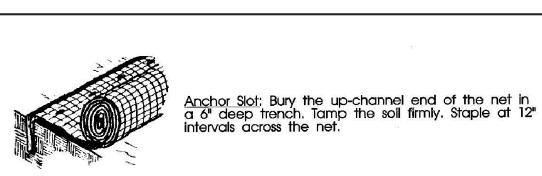
City of Colorado Springs Stormwater Quality Construction Detail and Maintenance Requirements

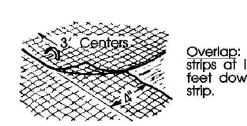
2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.

6. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

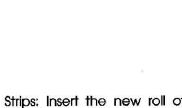
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED

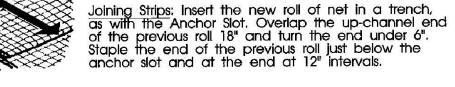


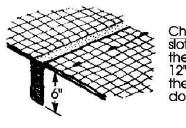




Overlap: Overlap edges of the strips at least 4". Staple every 3 feet down the center of the



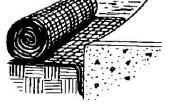




Check Slots: On erodible soils or steep slopes, check slots should be made every 15 feet, Insert a fold of the net into a 6" trench and tamp firmly. Staple at 12" intervals across the net. Lay the net smoothly on the surface of the soil - do not stretch the net, and do not allow wrinkles.



Anchoring Ends At Structures: Place the end of the net in a 6" slot on the up-channel side of the structure. Fill the trench and tamp firmly. Roll the net up the channel. Place staples at 12" intervals along the anchor end of



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City of Colorado Springs Storm Water Quality

Figure ECB-2 Erosion Control Blanket Installation Requirements

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO. DRAWING SCALE: HORIZONTAL: N/A VERTICAL: N/A

> **EROSION** CONTROL **DETAILS**

PREPARED BY:

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DATE

6-20-17

9-6-18

TDM

POND SR4

GRADING, FISTRUCTION

**ISSUE** 

DESIGNED BY:

DRAWN BY:

CHECKED BY:

FILE NAME:

1ST SUBMITTAL

RESUBMITTAL

Engineers • Surveyors

PROJECT NO. 20988-00CSCV DRAWING NO.

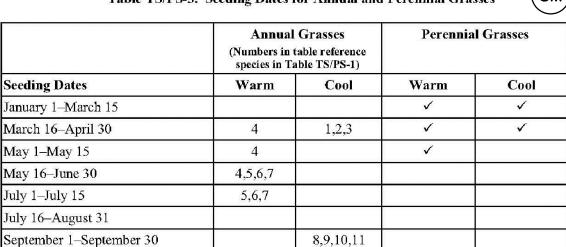
EPC 10/10/18 EL PASO COUNTY FILE NO: SP-17-001

# **Temporary and Permanent Seeding (TS/PS)**

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses



TS/PS-6

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP

## Maintenance and Removal

October 1–December 31

November 2010

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

Fact Sheet for additional guidance. SILT FENCE NOTES INSTALLATION REQUIREMENTS SECTION DIMENSION OF 2 INCHES.

FABRIC —— ANCHORED IN TRENCH AND ATTACHED POST (2" X 2" NOMINAL) -ANCHORED IN TRENCH AND FIRMLY ATTACHED SILT FENCE 1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND 6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND 2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE AND SEDIMENT TO SETTLE, A MINIMUM DISTANCE OF SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED. 7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND 3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY INPOUND WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE **MAINTENANCE REQUIREMENTS** 4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY 1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
DAMAGED, COLLAPSED, UNENTRENCHED OR
INEFFECTIVE SILT FENCES SHALL BE PROMPTLY
REPAIRED OR REPLACED. 2. SEDIMENT SHALL BE REMOVED FROM BEHIND

TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES. 5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4' LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.

SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT. 3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

Figure SF-2 Silt Fence Construction Detail and Maintenance

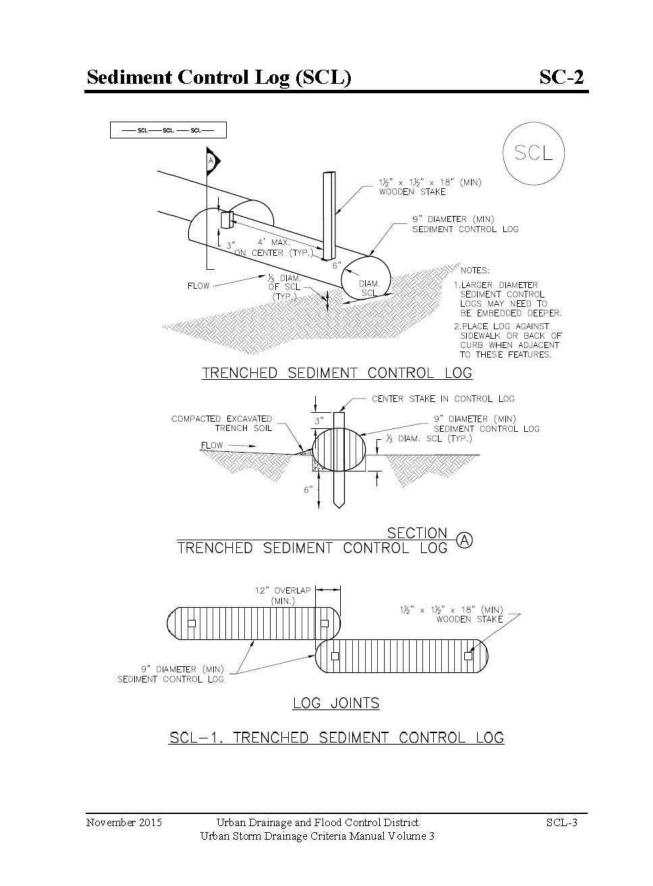
Urban Drainage and Flood Control District

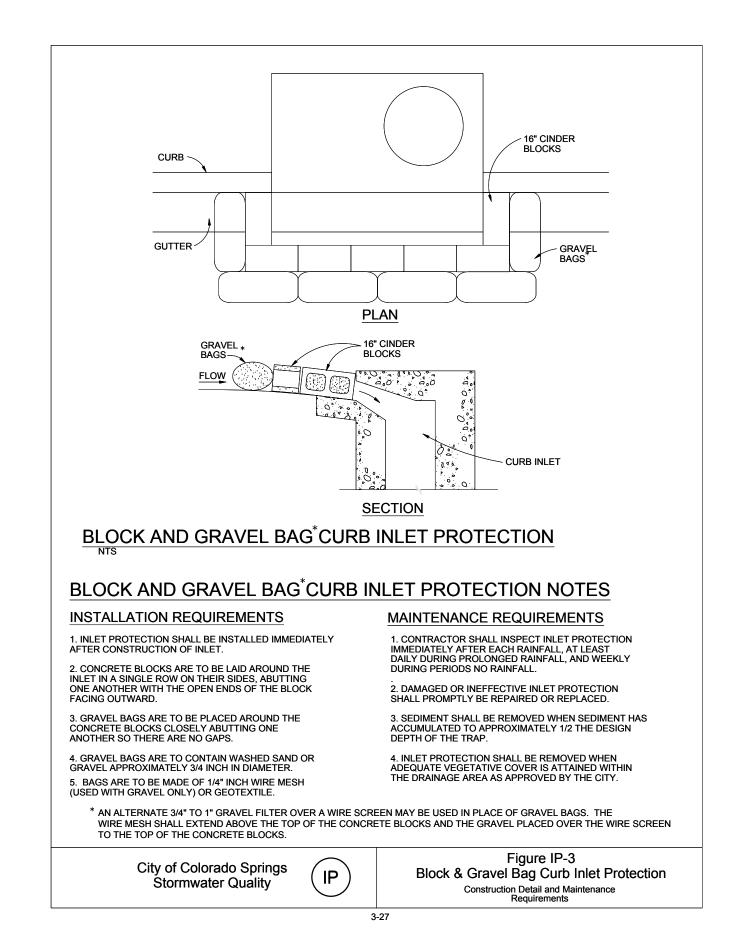
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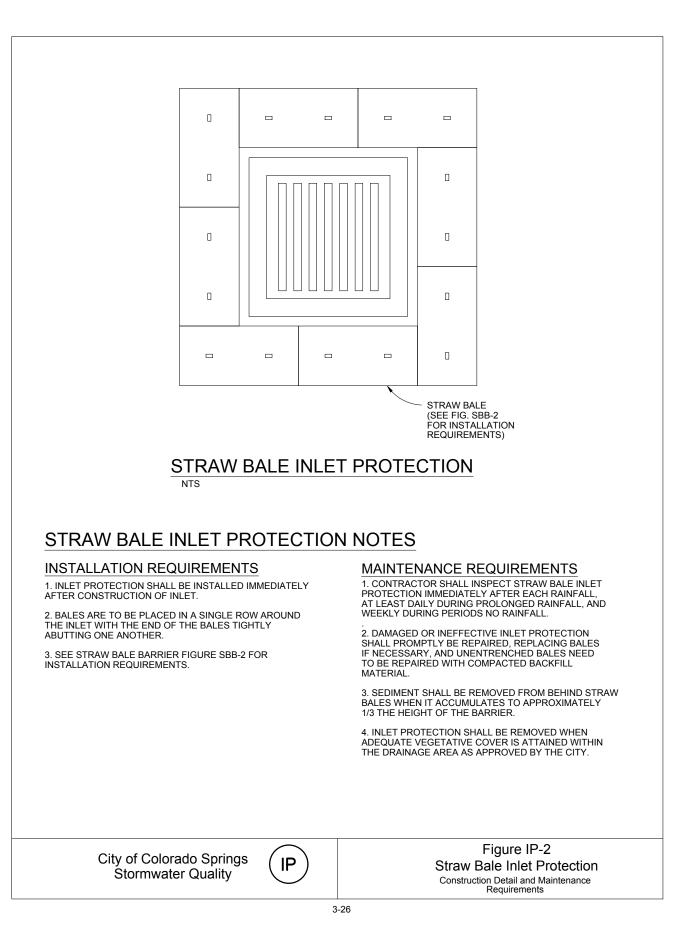
November 2010

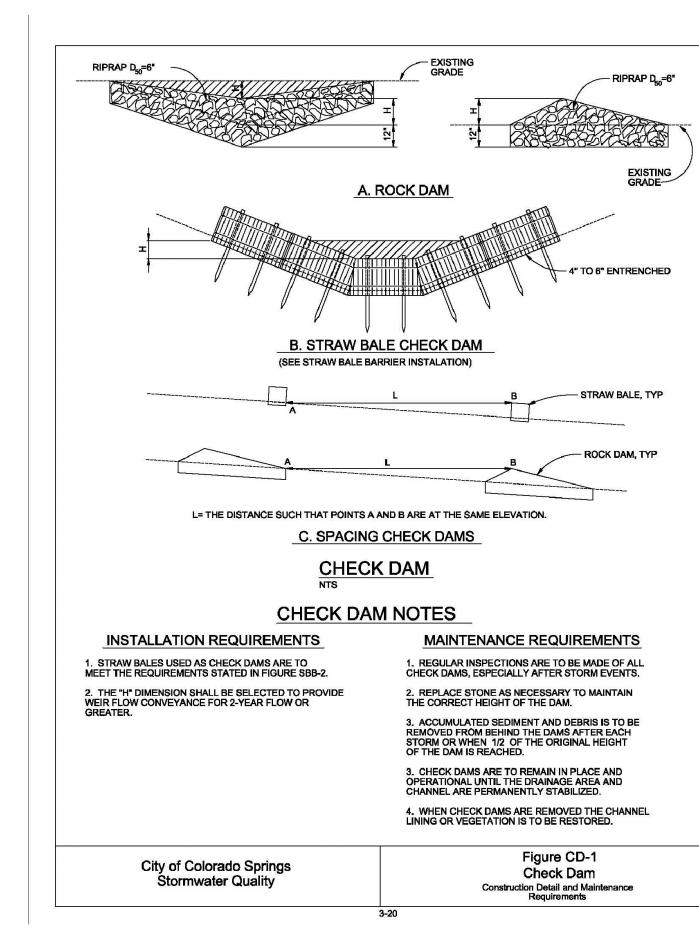
City of Colorado Springs Stormwater Quality

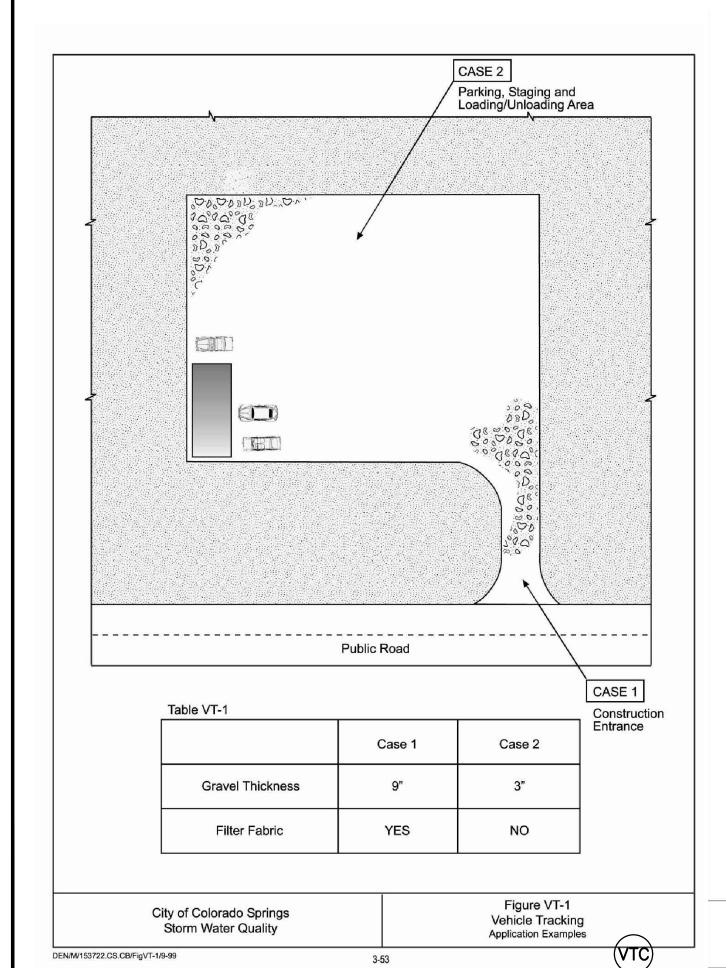
SP-17-001 SHEET: 5 OF 27

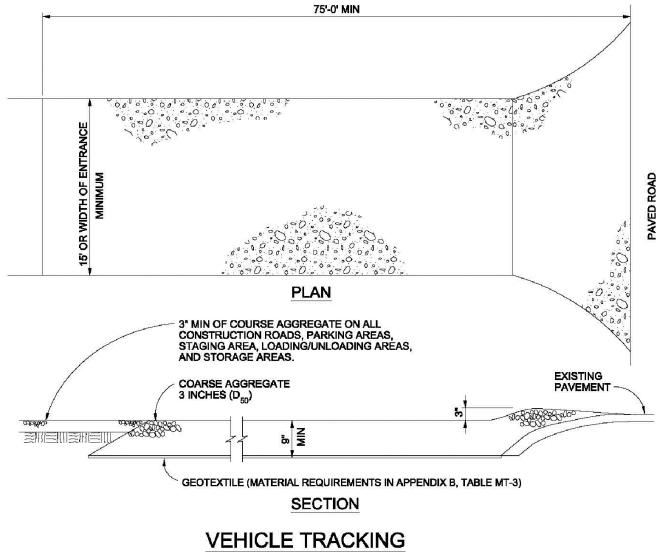












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VEHICLE TRACKING NOTES **INSTALLATION REQUIREMENTS** 1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION

2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP. 3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.

4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED. 5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE City of Colorado Springs

Stormwater Quality

MAINTENANCE REQUIREMENTS 1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM 2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY. 3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM 4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY. 5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION. Figure VT-2

Vehicle Tracking

SC-5 Rock Sock (RS) (54545**)** 5545 1½" (MINUS) CRUSHED ROCK ENCLOSED IN WIRE MESH (MINUS) CRUSHED ROCK ENCLOSED IN WIRE MESH WIRE TIE ENDS -

> 4" TO 6" MAX AT CURBS. OTHERWISE - GROUND SURFACE O" ON BEDROCK OR - 6"-10" DEPENDING HARD SURFACE, 2" ON EXPECTED IN SOIL SEDIMENT LOADS ROCK SOCK SECTION ROCK SOCK PLAN

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A RS-1. ROCK SOCK PERIMETER CONTROL

RS-2 Urban Drainage and Flood Control District November 2010 Urban Storm Drainage Criteria Manual Volume 3

Rock Sock (RS)

ROCK SOCK MAINTENANCE NOTES 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

EROSION, AND PERFORM NECESSARY MAINTENANCE.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE. 4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO

MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS

IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK. 6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION. 7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD) NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

 ${
m NOTE}$ : THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

POND SR4 TPL KE GRADING, FISTRUCTION

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PREPARED BY:

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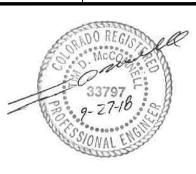
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1ST SUBMITTAL 6-20-17 ESUBMITTAL 9-6-18

DESIGNED BY: TDM DRAWN BY: KGV CHECKED BY: TDM FILE NAME:



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DRAWING SCALE: HORIZONTAL: N/A VERTICAL: N/A

**EROSION** CONTROL **DETAILS** 

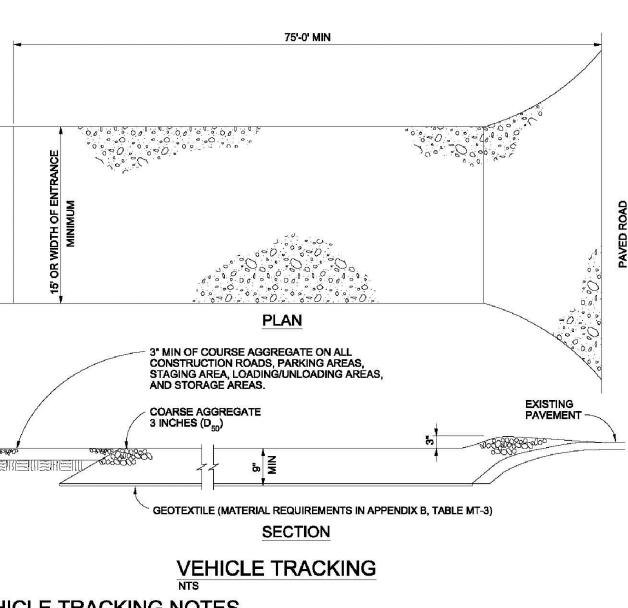
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SP-17-001 SHEET: 6 OF

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RS-3 EPC 10/10/18

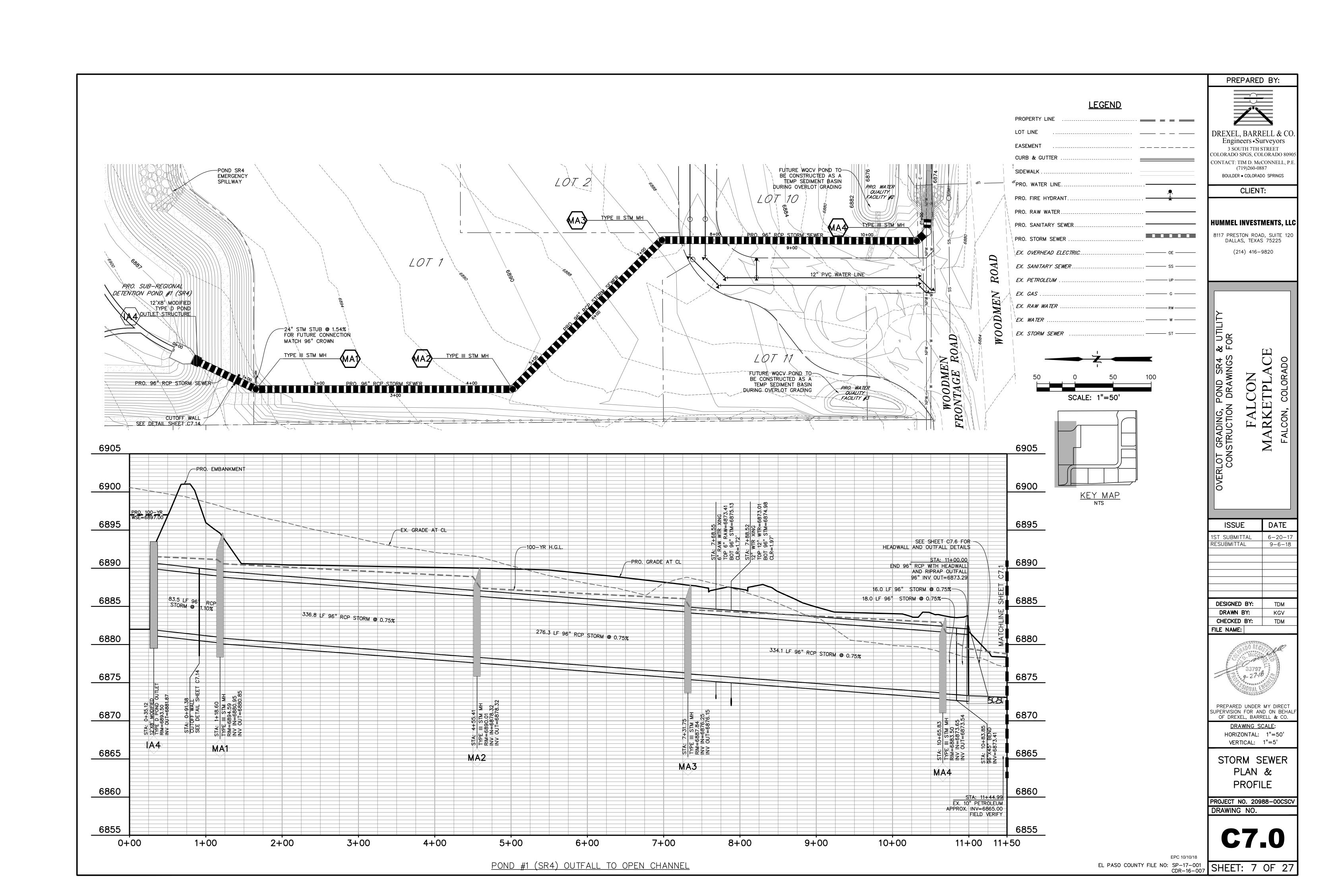
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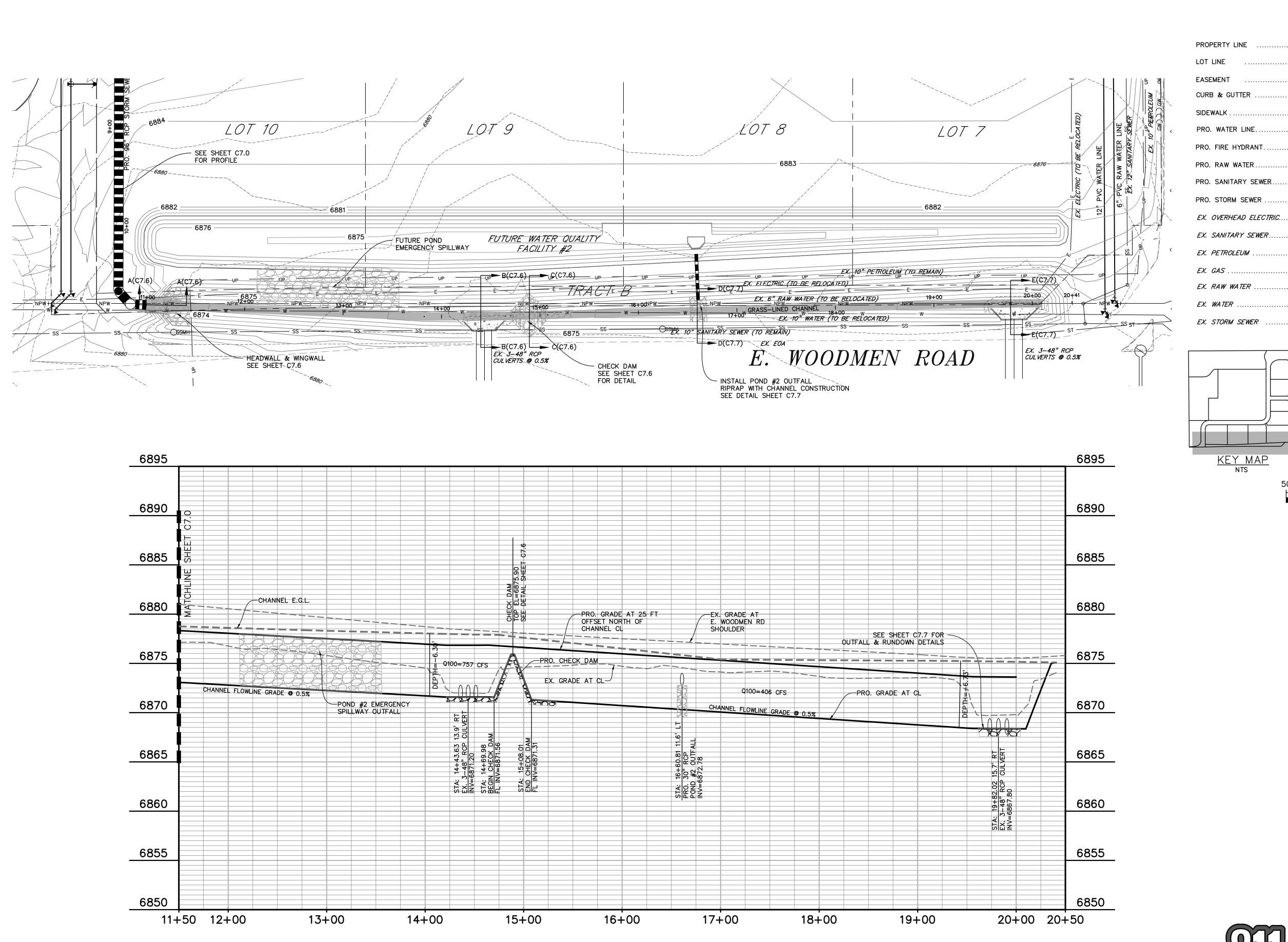


ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1½" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK ROCK SOCK, REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS. GRADATION TABLE SIEVE SIZE MASS PERCENT PASSING SQUARE MESH SIEVES **ROCK SOCK JOINTING** MATCHES SPECIFICATIONS FOR NO. 4 ROCK SOCK INSTALLATION NOTES COARSE AGGREGATE FOR CONCRETE 1. SEE PLAN VIEW FOR: PER AASHTO M43. ALL ROCK SHALL BE -LOCATION(S) OF ROCK SOCKS. 2. CRUSHED ROCK SHALL BE 11/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES)

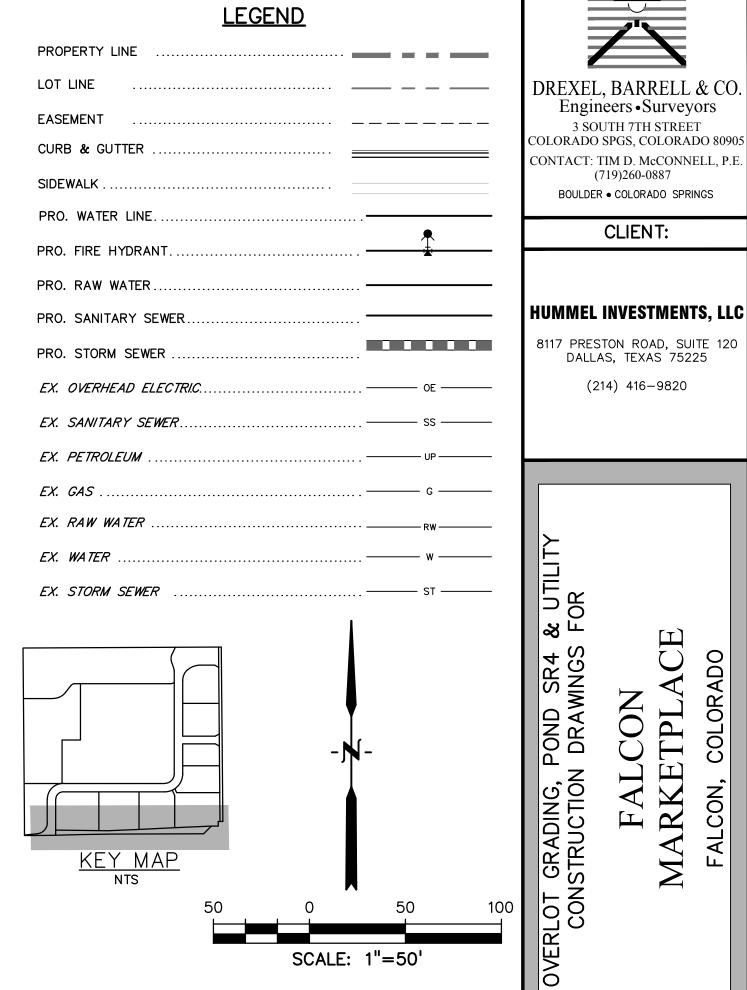
AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (11/2" MINUS). MAXIMUM OPENING OF 1/2", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS. 5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE





OPEN CHANNEL ALONG E. WOODMEN ROAD



ISSUE DATE 1ST SUBMITTAL 6-20-17 RESUBMITTAL 9-6-18 DESIGNED BY: DRAWN BY: KGV CHECKED BY: TDM

PREPARED BY:

Engineers • Surveyors

3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 8090:

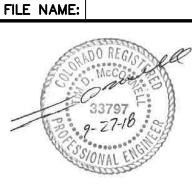
ONTACT: TIM D. McCONNELL, P.I (719)260-0887

BOULDER • COLORADO SPRINGS

CLIENT:

(214) 416-9820

FALCON IARKETPLA



PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

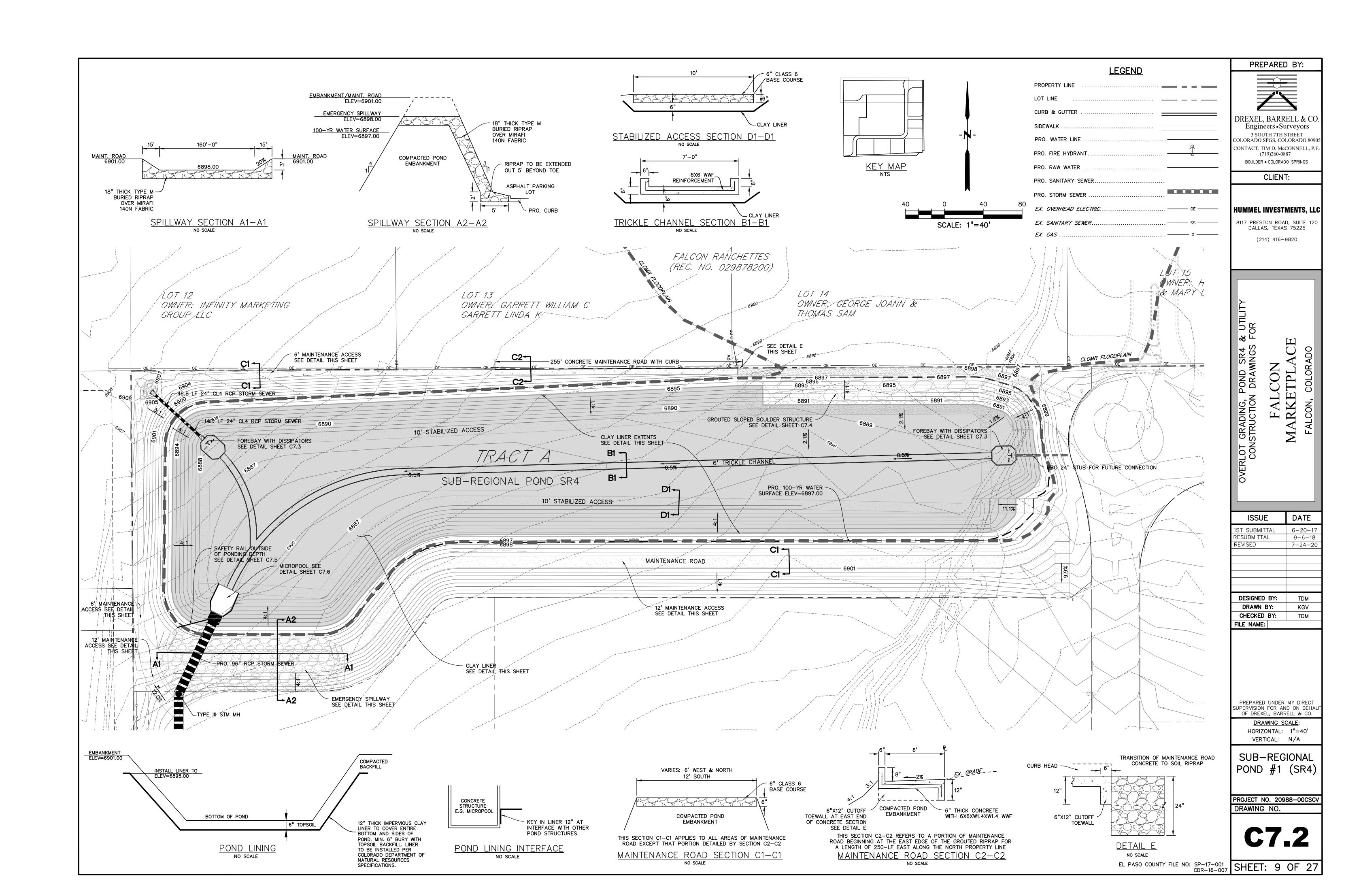
DRAWING SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

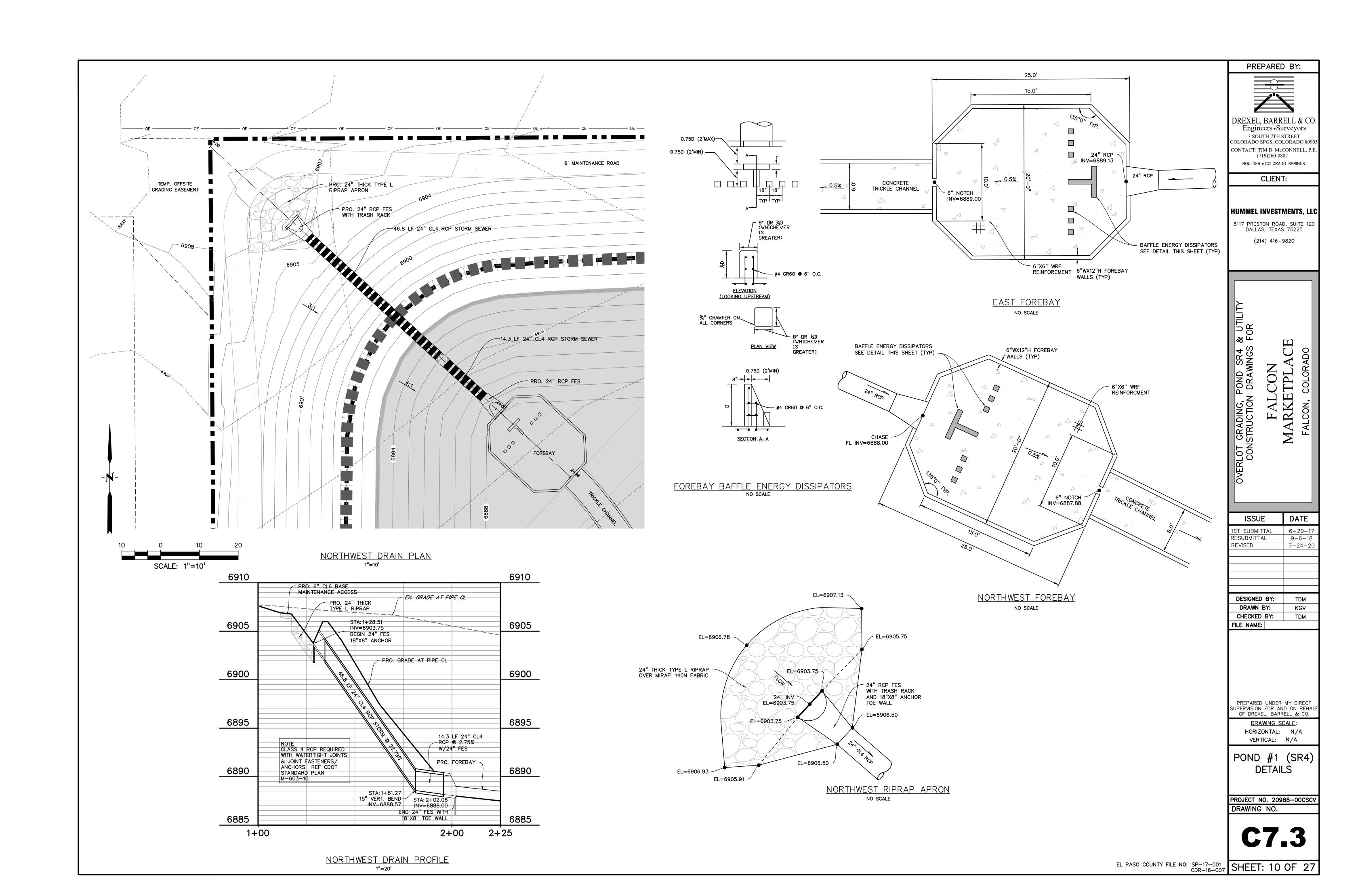
STORM SEWER PLAN & PROFILE

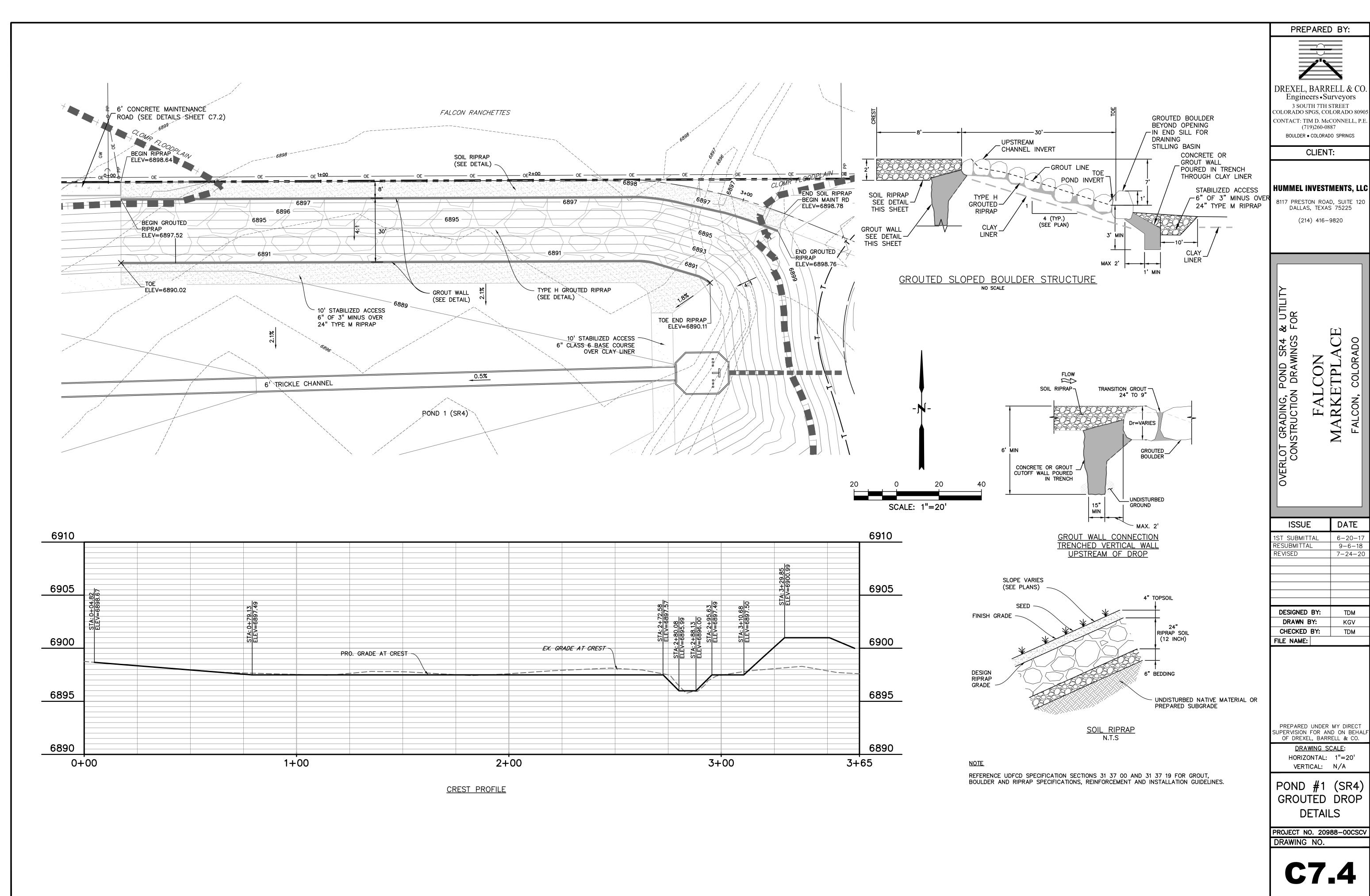
PROJECT NO. 20988-00CSCV Know what's below.

Call before you dig. DRAWING NO. CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

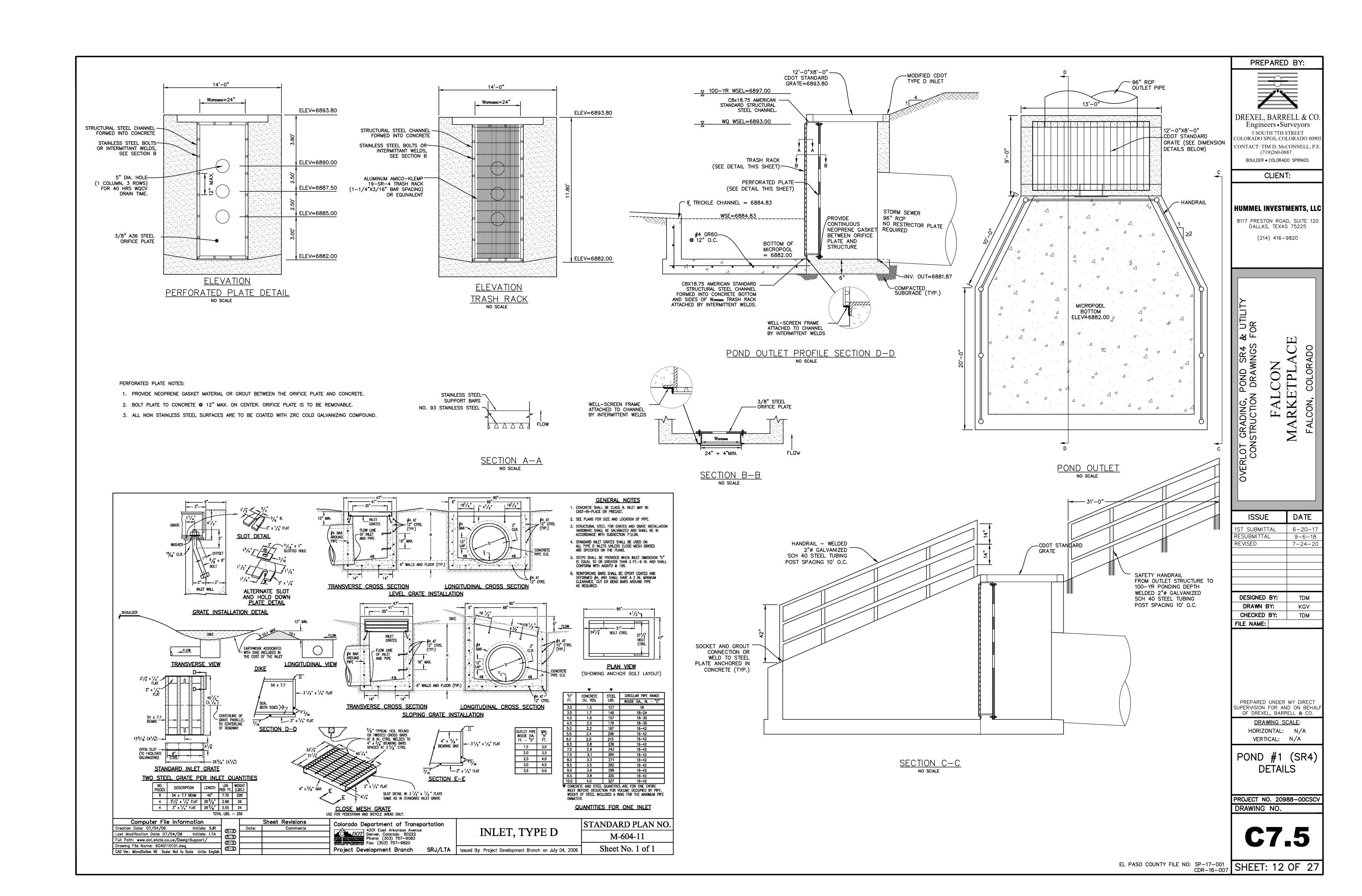
EL PASO COUNTY FILE NO: SP-17-001 SHEET: 8 OF 27

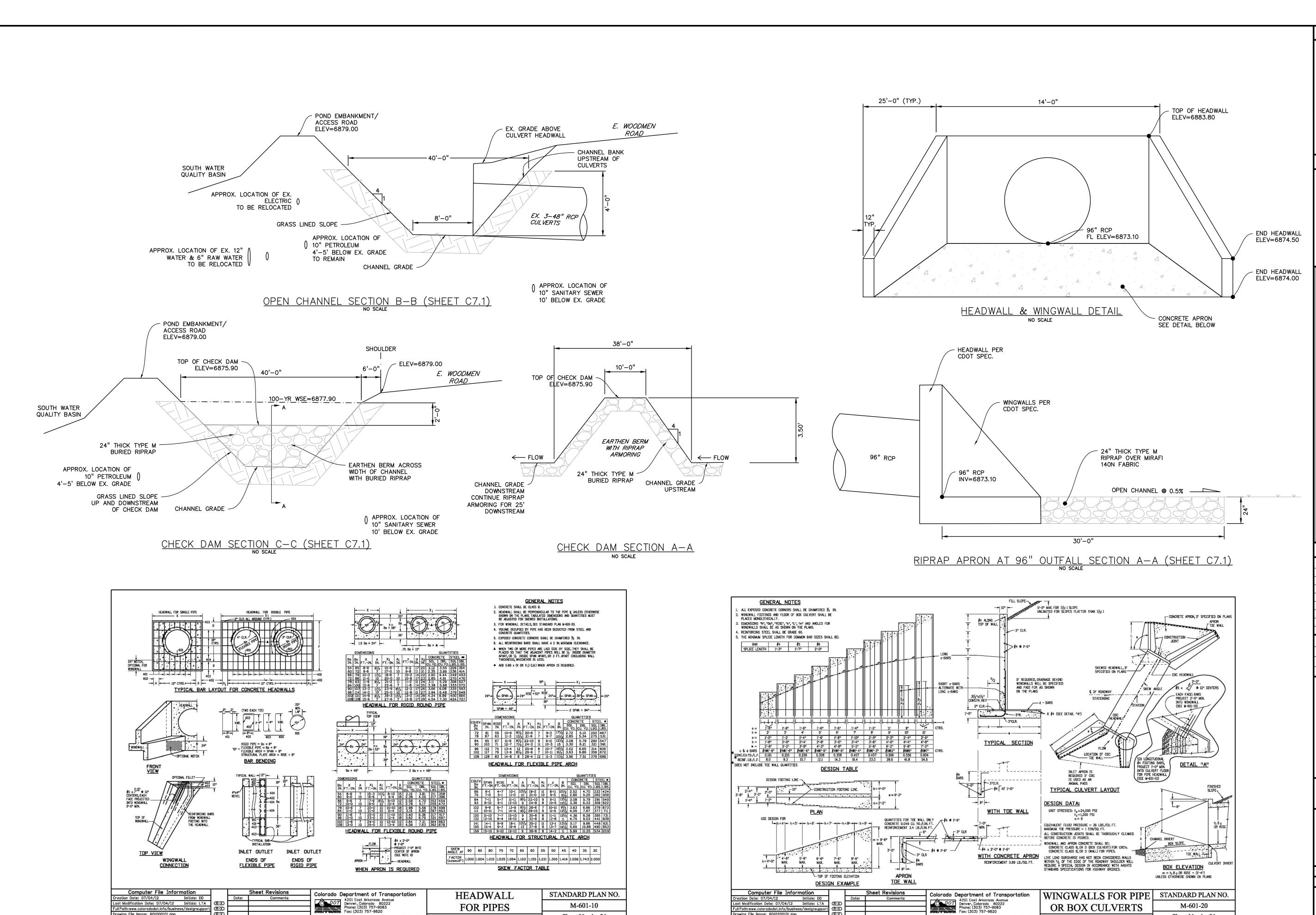






EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 11 OF 27





Sheet No. 1 of 1

Issued By: Project Development Branch July 4, 2012

Project Development Branch DD/LTA

PREPARED BY:

DREXEL, BARRELL & CO.
Engineers • Surveyors
3 SOUTH 7TH STREET
COLORADO SPGS, COLORADO 80905
CONTACT: TIM D. McCONNELL, P.E.
(719)260-0887

BOULDER • COLORADO SPRINGS

CLIENT:

IMPL INVESTMENTS IIO

HUMMEL INVESTMENTS, LLC 8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

OVERLOT GRADING, POND SR4 & UTILITY
CONSTRUCTION DRAWINGS FOR
FALCON
FALCON
COLORADO
FALCON
F

ISSUE	DATE
1ST SUBMITTAL RESUBMITTAL	6-20-17 9-6-18
DESIGNED BY:	TDM

DRAWN BY:

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KGV

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

OPEN CHANNEL DETAILS

PROJECT NO. 20988-00CSCV DRAWING NO.

**C7.6** 

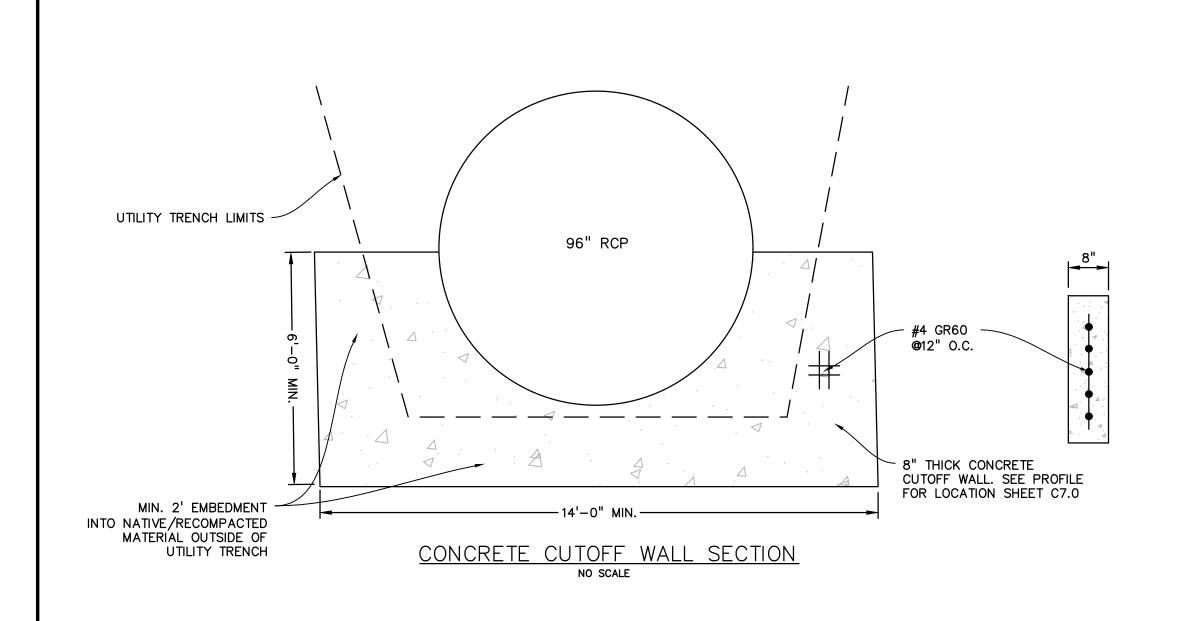
EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 13 OF 27

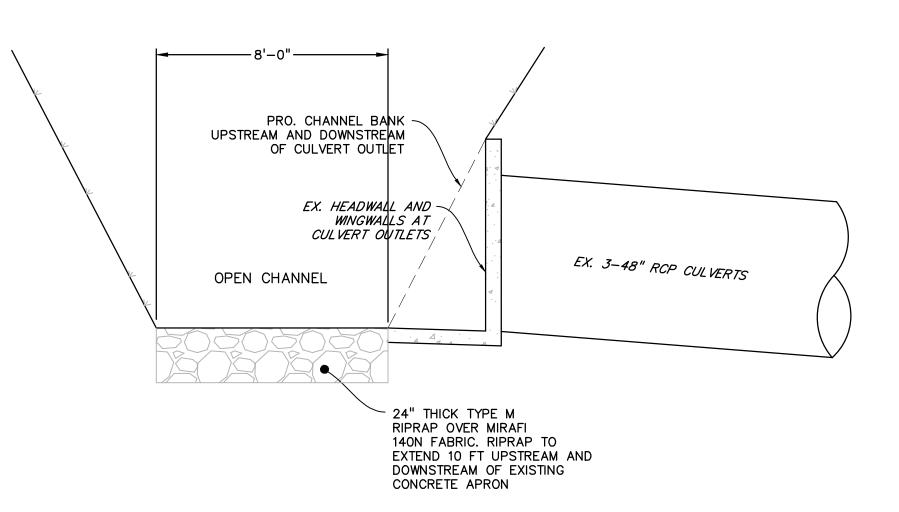
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Sheet No. 1 of 1

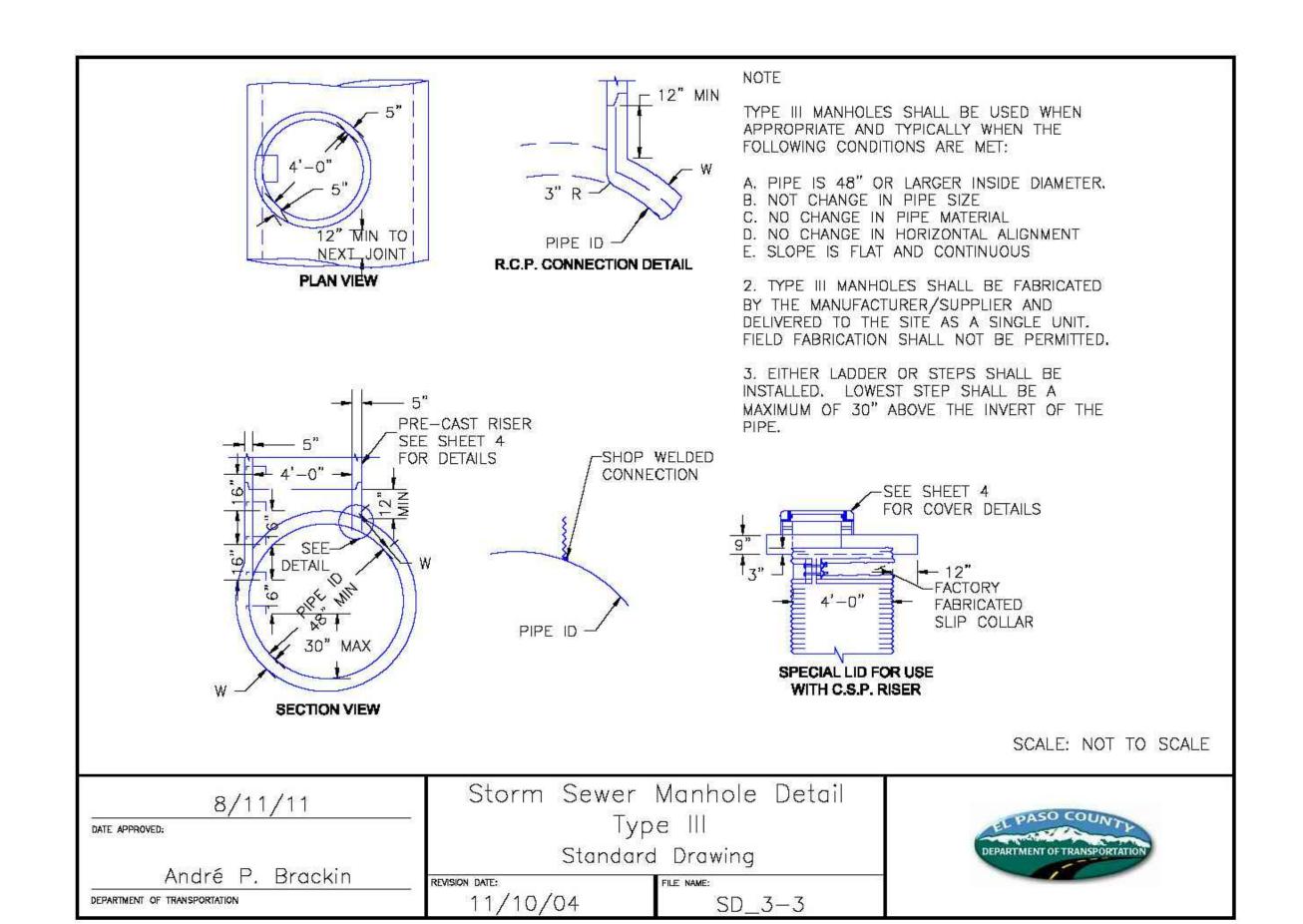
Issued By: Project Development Branch July 4, 2012

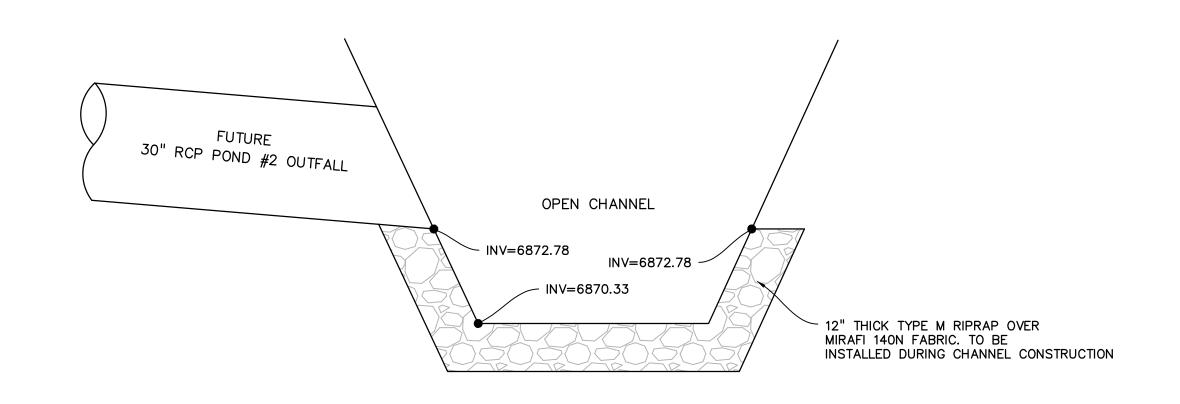
Project Development Branch DD/LTA





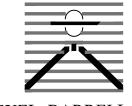
RIPRAP OUTLET PROTECTION AT EXISTING CULVERTS SECTION B-B & E-E (SHEET C7.1) NO SCALE





POND #2 OUTFALL TO OPEN CHANNEL SECTION D-D (SHEET C7.1) NO SCALE

PREPARED BY:



DREXEL, BARRELL & CO. Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 80905 CONTACT: TIM D. McCONNELL, P.E (719)260-0887

BOULDER • COLORADO SPRINGS

CLIENT:

HUMMEL INVESTMENTS, LLC

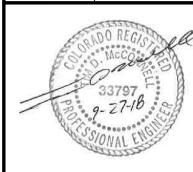
8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

OVERLOT GRADING, POND SR4 & UTILI CONSTRUCTION DRAWINGS FOR FALCON IARKETPLA

ISSUE	DATE
1ST SUBMITTAL RESUBMITTAL	6-20-17 9-6-18

DESIGNED BY:	TDM
DRAWN BY:	KGV
CHECKED BY:	TDM
ILE NAME:	



PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALI OF DREXEL, BARRELL & CO.

DRAWING SCALE: HORIZONTAL: N/A VERTICAL: N/A

STORM SEWER **DETAILS** 

PROJECT NO. 20988-00CSCV DRAWING NO.

EPC 10/10/18

EL PASO COUNTY FILE NO: SP-17-001 SHEET: 14 OF 27

# UTILITY CONSTRUCTION DOCUMENTS FALCON MARKETPLACE

SE 1/4 OF THE SE 1/4 OF SECTION 1, T13S, R65W OF THE 6TH P.M. 11680 E. WOODMEN ROAD, FALCON, COLORADO

### WATER AND SEWER MAIN EXTENSIONS GENERAL NOTES

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH CURRENT WOODMEN HILLS METROPOLITAN DISTRICT (WHMD, THE DISTRICT) SPECIFICATIONS.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID. ALL STATIONING IS CENTER LINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTER LINE UNLESS
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE
- FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING. DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE
- CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT
- ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF
- TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
- 11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION 12. BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25'
- INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION. 13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE
- PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
- 14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS
- 15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
- 16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT
- ENGINEER PRIOR TO EXECUTION. 17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
- 18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
- 19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
- 20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT: PRIOR TO THE START OF CONSTRUCTION, A PRE—CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRECONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
- 21. TESTING OF FACILITIES: - THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
  - ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS TEST 100 % OF ALL LINES
  - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS) ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING
  - ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION. SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW
- 22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE
- THE IMPROVEMENTS AT THE CONTRACTORS COST. 23. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
- 24. ACCEPTANCE: - THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.
- A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION)
- 25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
- 26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
- 27. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES. CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.

28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

# VICINITY MAP



# NOT TO SCALE WATER SYSTEM INSTALLATION NOTES

- 29. ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR EQUAL, PRESSURE CLASS 200. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL HAVE A MINIMUM COVER DEPTH OF FIVE AND ONE-HALF (5.5) FEET.
- 30. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARSONITE MARKERS AS APPLICABLE.
- 31. THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVICE STUB OUTS FOR FUTURE DEVELOPMENT. ANY REQUIRED REALIGNMENT. (HORIZONTAL OR VERTICAL). SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
- 32. FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" X 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION (GREASE). ACCEPTABLE BRANDS ARE AMERICAN AVK SERIES 2700 (MODERN) AND MUELLER SUPER CENTURION 250.
- 33. ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED #12 TRACER WIRE WITH TEST STATIONS AT INTERVALS NO GREATER THAN 500 FT (VALVE BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).
- 34. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO EXISTING LINES.
- 35. IRRIGATION SERVICES SHALL HAVE A STOP AND WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
- 36. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
- NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-T TESTING, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
- NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
- ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

## WASTEWATER SYSTEM INSTALLATION NOTES

- 37. SANITARY SEWER LENGTHS ARE MH CENTER-MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED IN-LINE PVC PUSH-ON WYES. TAPPING SADDLES MAY ONLY BE USED FOR TAPPING PRE-EXISTING MAINS.
- 38. ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 RUBR-NEK JOINT WRAP OR EQUIVALENT AND COATED. 39. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
- NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
- NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
- ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
- DOWNSTREAM PLUG CAN BE REMOVED ONCE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

# WATER AND SEWER MAIN EXTENSIONS

ANY CHANGES OR ALTERATIONS AFFECTING THE GRADE, ALIGNMENT, ELEVATION AND/OR DEPTH OF COVER OF ANY WATER OR SEWER MAINS OR OTHER APPURTENANCES SHOWN ON THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATIN AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

2-19-2020 BEN HUMMEL DATE LG HI FALCON, LLC

## FIRE AUTHORITY APPROVAL

3953 MAPLE AVE, #290

DALLAS, TX 75219

THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS SHOWN ON THIS WATER INSTALLATION PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE FIRE DISTRICT SERVING THE PROPERTY NOTED ON THE PLANS.

FIRE PROTECTION DISTRICT: FALCON FIRE PROTECTION DISTRICT

## **DISTRICT APPROVALS**

THE WOODMEN HILLS METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WOODMEN HILLS METROPOLITAN DISTRICT WATER DESIGN APPROVAL DATE: 2-21-2920BY: PROJECT NO. 26988 - 66CSCV

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

THE WOODMEN HILLS METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

> WOODMEN HILLS METROPOLITAN DISTRICT WASTEWATER DESIGN APPROVAL DATE: 2-21-2/020 L PROJECT NO. 20988 - BOCSCV

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

# **BENCHMARK**

ELEVATIONS ARE BASED ON COLORADO SPRINGS UTILITIES FACILITIES INFORMATION SYSTEM (FIMS) "BLT 167", A 2" ALUMINUM CAP IN CONCRETE LOCATED ON AN ELECTRIC TRANSFORMER PAD AT THE SOUTHEAST CORNER OF WOODMEN ROAD AND MERIDIAN ROAD, WITH AN ELEVATION OF 6873.18 (NGVD 29).

# LEGAL DESCRIPTION

THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOGETHER WITH THAT PORTION OF BLOCK 1, TOWN OF FALCON, LYING WITHIN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO.

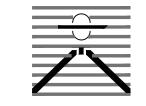
EXCEPT THOSE PORTIONS CONVEYED TO WOODMEN ROAD METROPOLITAN DISTRICT BY WARRANTY DEED RECORDED APRIL 19, 2004 AT RECEPTION NO. 204062427 AND PERSONAL REPRESENTATIVE'S DEED RECORDED SEPTEMBER 7, 2007 AT RECEPTION NO. 207116129, EL PASO COUNTY. COLORADO RECORDS.

# FLOODPLAIN STATEMENT

THE EFFECTIVE FLOODPLAIN ZONE A LIMITS ARE DEFINED ON THE FIRM FOR EL PASO COUNTY. COLORADO AND UNINCORPORATED AREAS, MAP NUMBER 8041C0575F, EFFECTIVE DATE MARCH 17, 1997. FEMA ISSUED PRELIMINARY FIRM MAP 08041C0553G DATED JULY 29, 2015 TO REFLECT LIMITS MODIFIED BY LOMR CASE NO. 12-08-0579P (FEBRUARY 28, 2013).

A CLOMR TO MODIFY THE FLOODPLAIN HAS BEEN SUBMITTED AND APPROVED BY FEMA. CASE NO. 17-08-0074R (MAY 26, 2017).

PREPARED BY



Engineers • Surveyors 3 SOUTH 7TH STREET OLORADO SPGS, COLORADO 809 CONTACT: TIM D. McCONNELL, P (719)260-0887

DREXEL, BARRELL & CO

BOULDER • COLORADO SPRINGS

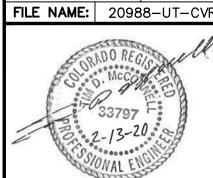
CLIENT:

**HUMMEL INVESTMENTS. LLC** 

8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225 (214) 416-9820

DATE IST SUBMITTAL 6-20-17 RESUBMITTAL 9-6-18 JTILITY REVISIONS 2-19-20

DESIGNED BY: DRAWN BY: CHECKED BY: TDM



PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

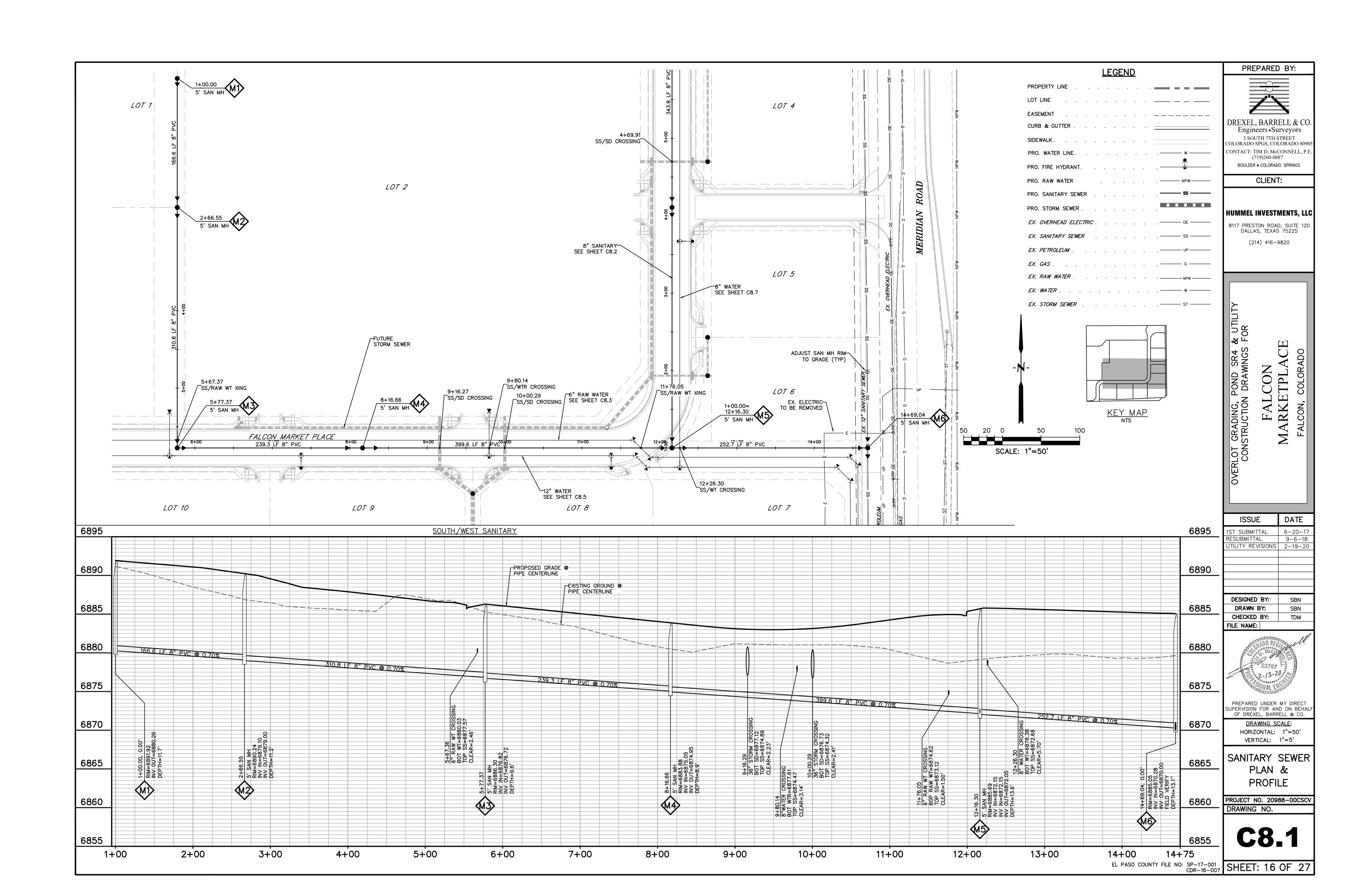
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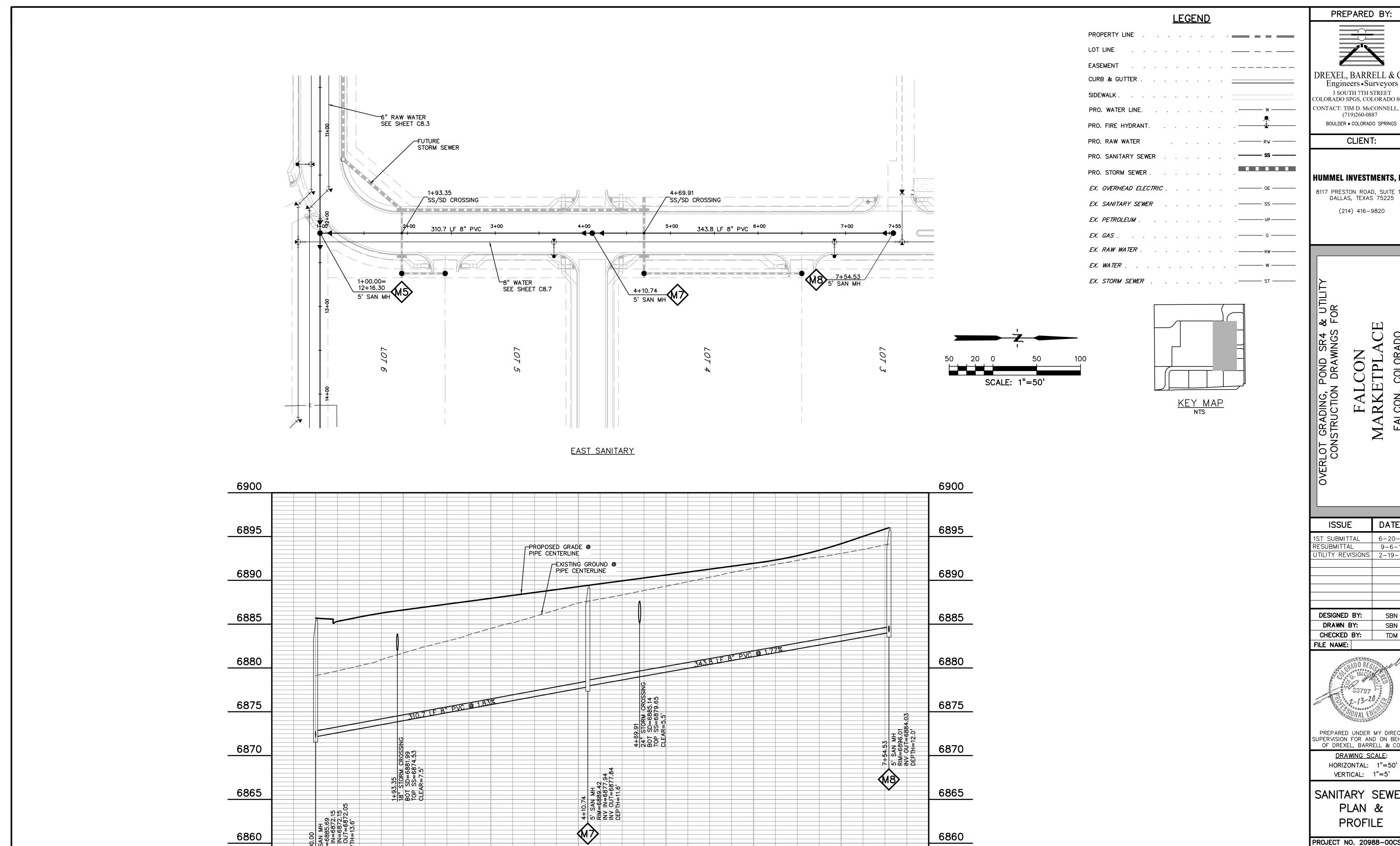
UTILITY COVER SHEET

PROJECT NO. 20988-00CSCV DRAWING NO.

EL PASO COUNTY FILE NO: SP-17-001

SP-17-001 SHEET: 15 OF 27





6855

1+00

2+00

3+00

4+00

5+00

6+00

7+00

PREPARED BY:

DREXEL, BARRELL & CO. Engineers • Surveyors

3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 80905 CONTACT: TIM D. McCONNELL, P.E (719)260-0887

CLIENT:

**HUMMEL INVESTMENTS, LLC** 

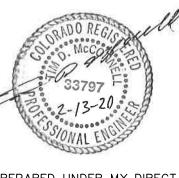
8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

T GRADING, POND SR4 NSTRUCTION DRAWINGS

ISSUE DATE 1ST SUBMITTAL RESUBMITTAL RESUBMITTAL 9-6-18
UTILITY REVISIONS 2-19-20

DESIGNED BY: DRAWN BY: CHECKED BY: FILE NAME:



PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

DRAWING SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

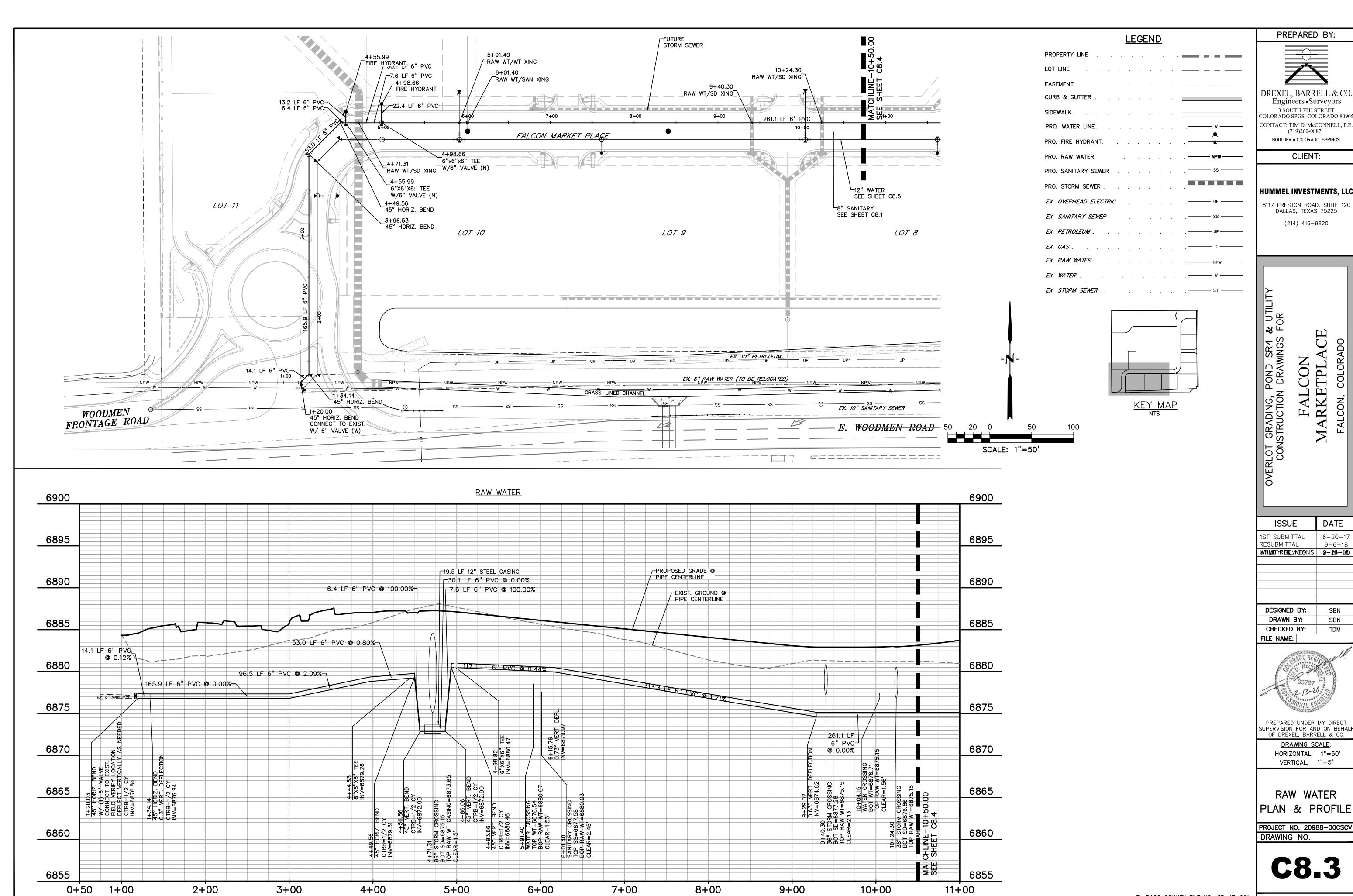
SANITARY SEWER PLAN & **PROFILE** 

PROJECT NO. 20988-00CSCV DRAWING NO.

EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 17 OF 27

6855

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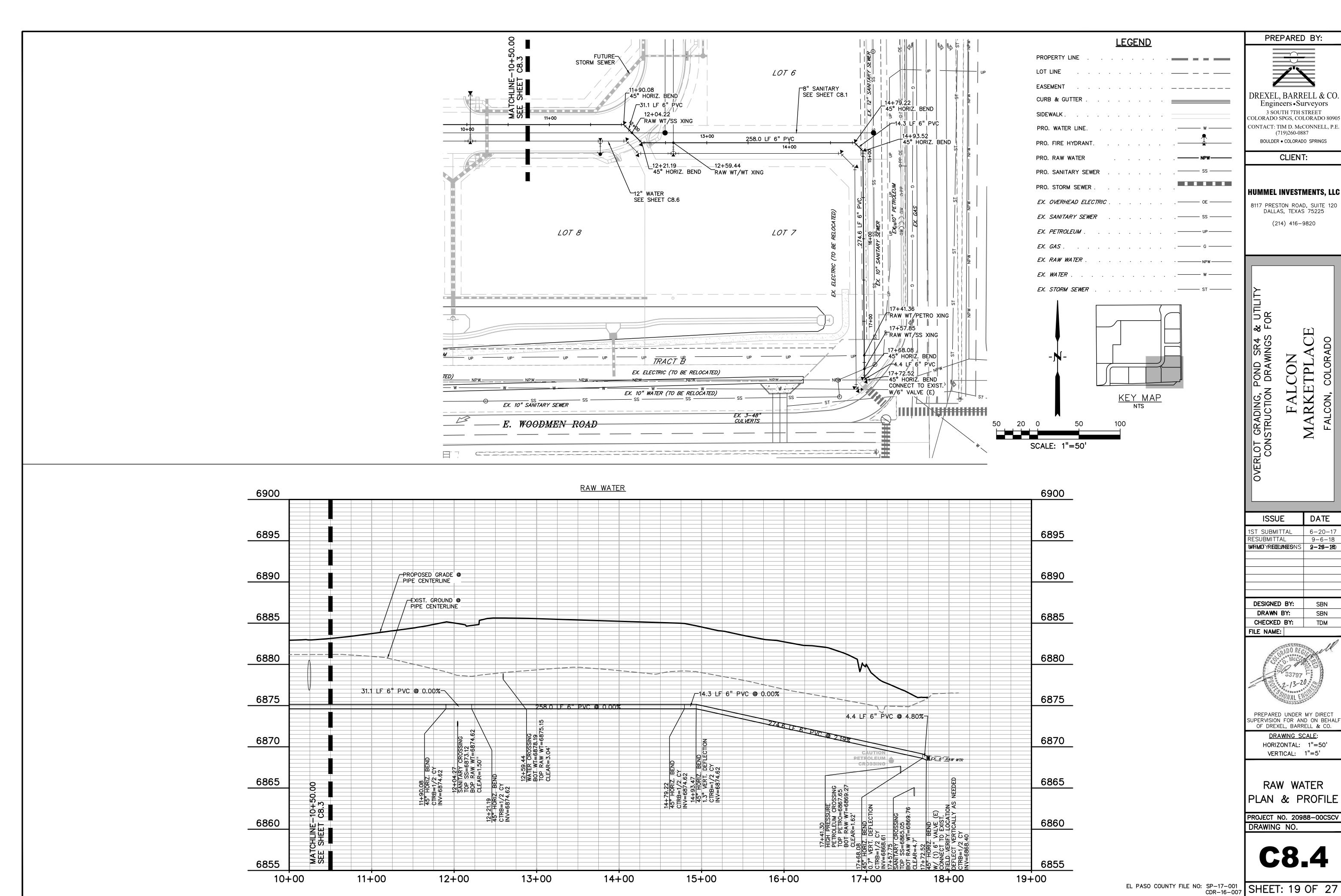


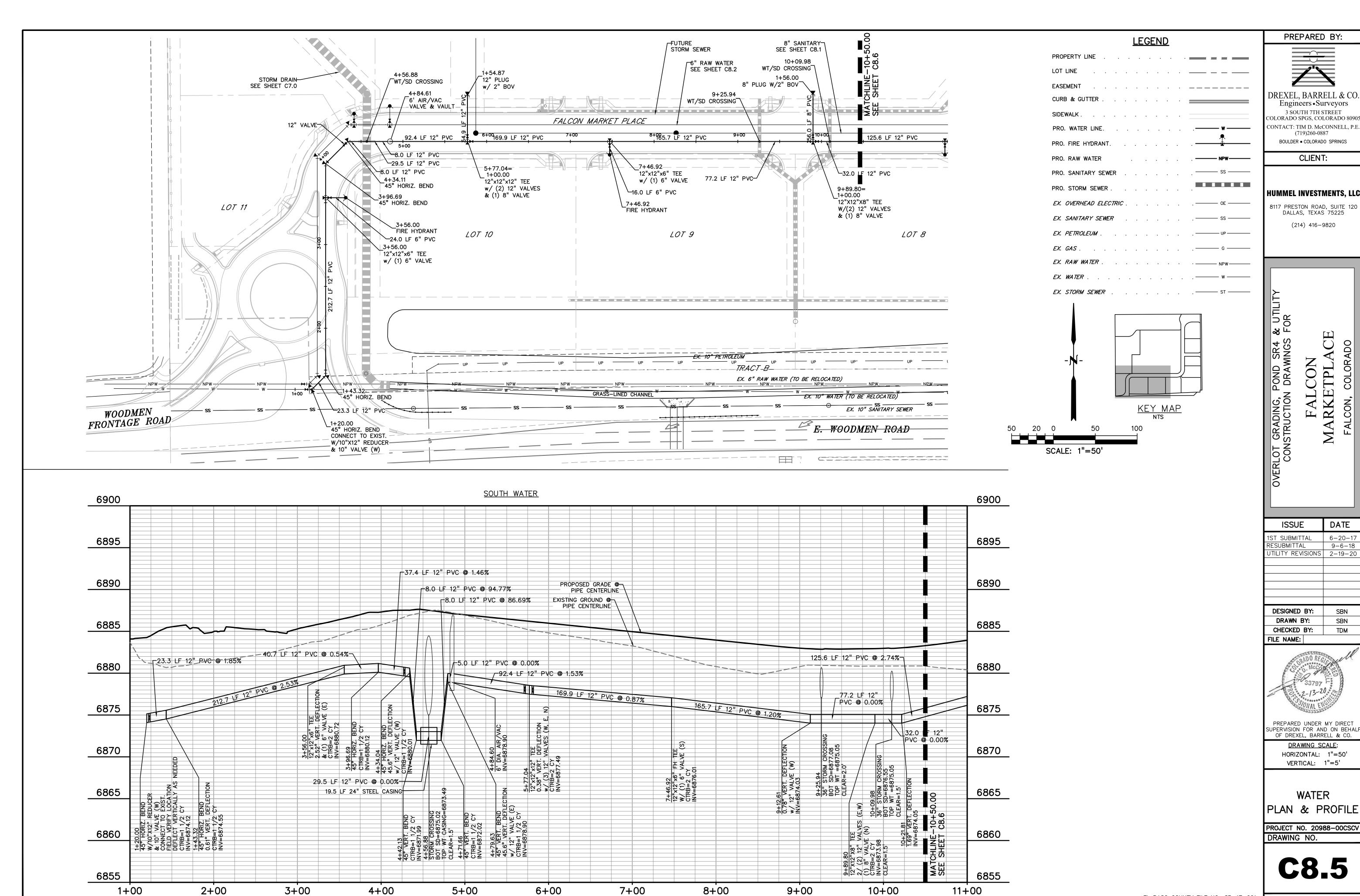
3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 8090

ISSUE	DATE
1ST SUBMITTAL	6-20-17
RESUBMITTAL	9-6-18
WHMDYREDUNESONS	2-29-180
DESIGNED BY:	SBN
DRAWN BY:	SBN
CHECKED BY:	TDM
FILE NAME:	
ORADO REG	Jul 1

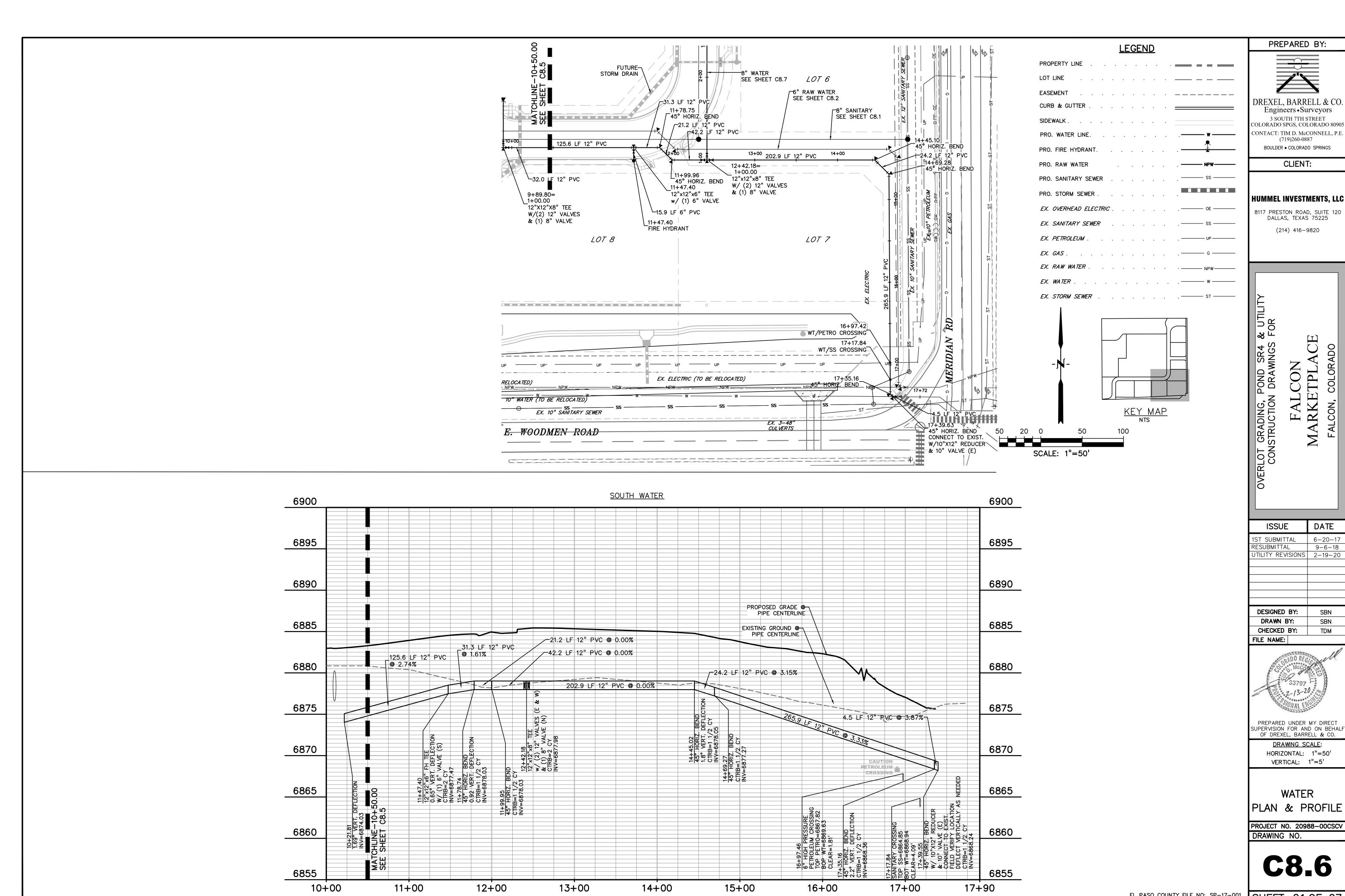
PLAN & PROFILE

EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 18 OF 27

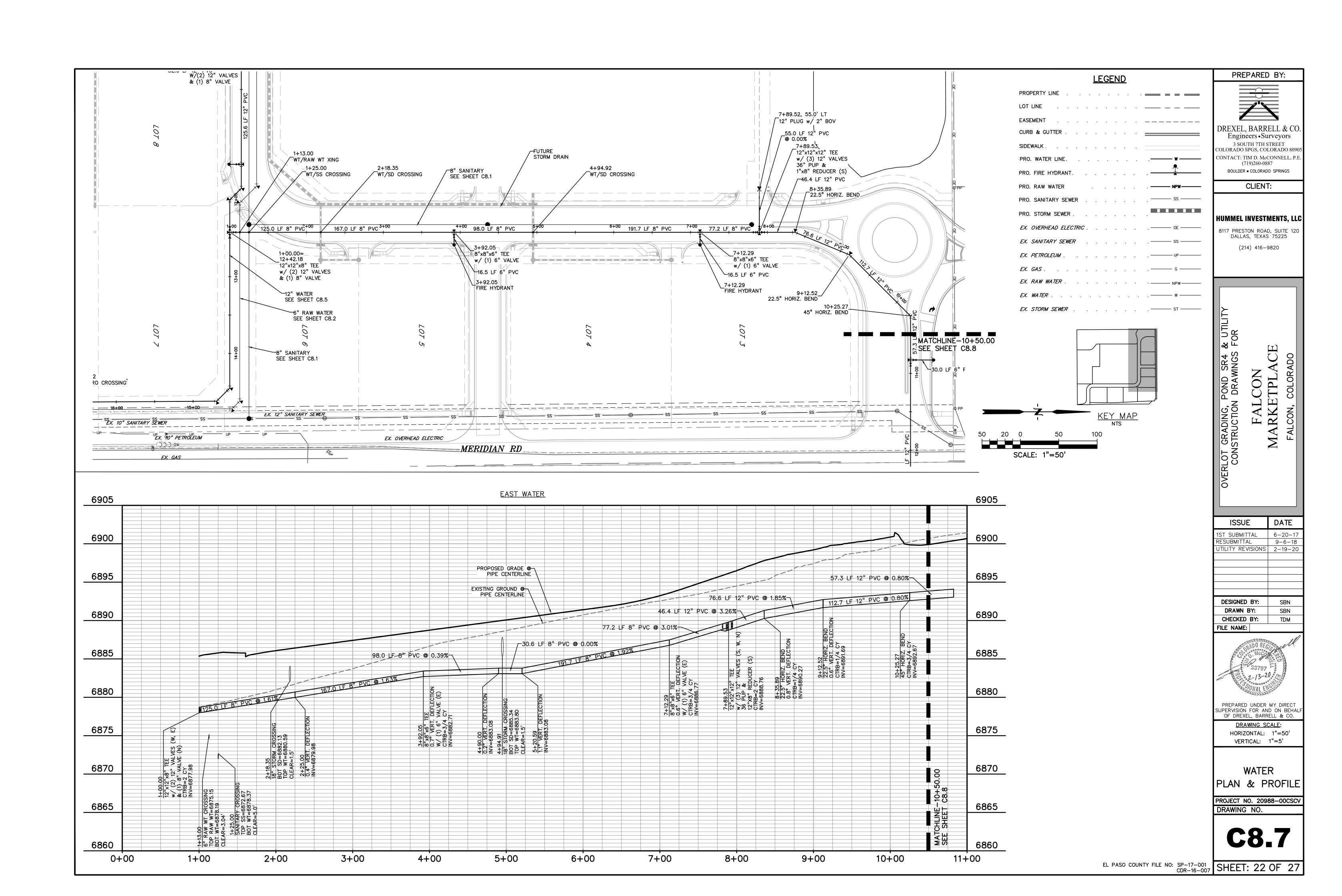


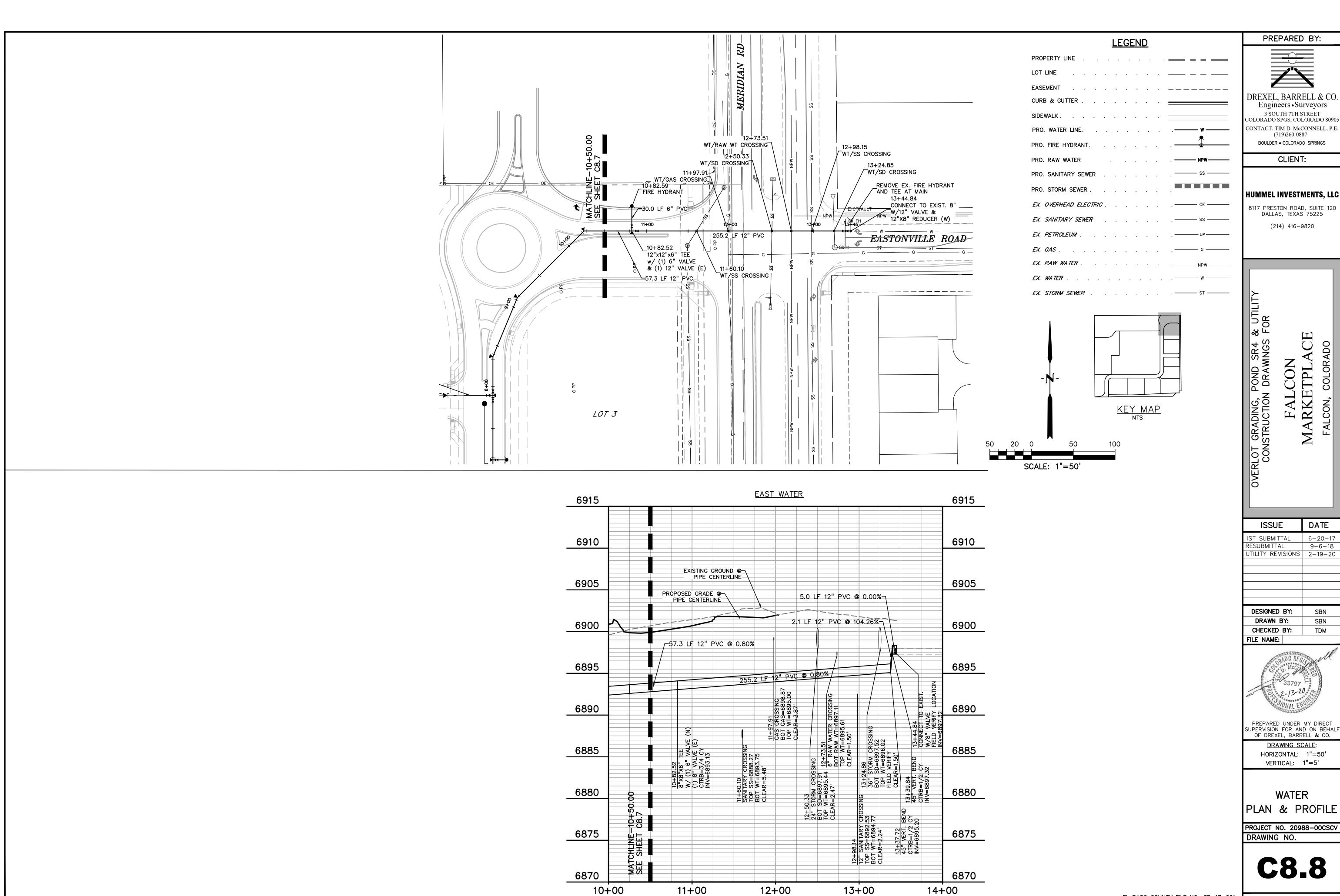


EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 20 OF 27



EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 21 OF 27

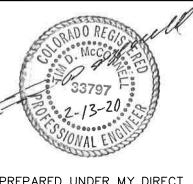




DREXEL, BARRELL & CO. Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 80905 CONTACT: TIM D. McCONNELL, P.I

8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

ISSUE	DATE
1ST SUBMITTAL	6-20-17
RESUBMITTAL	9-6-18
UTILITY REVISIONS	2-19-20
DESIGNED BY:	SBN
DRAWN BY:	SBN
CHECKED BY:	TDM
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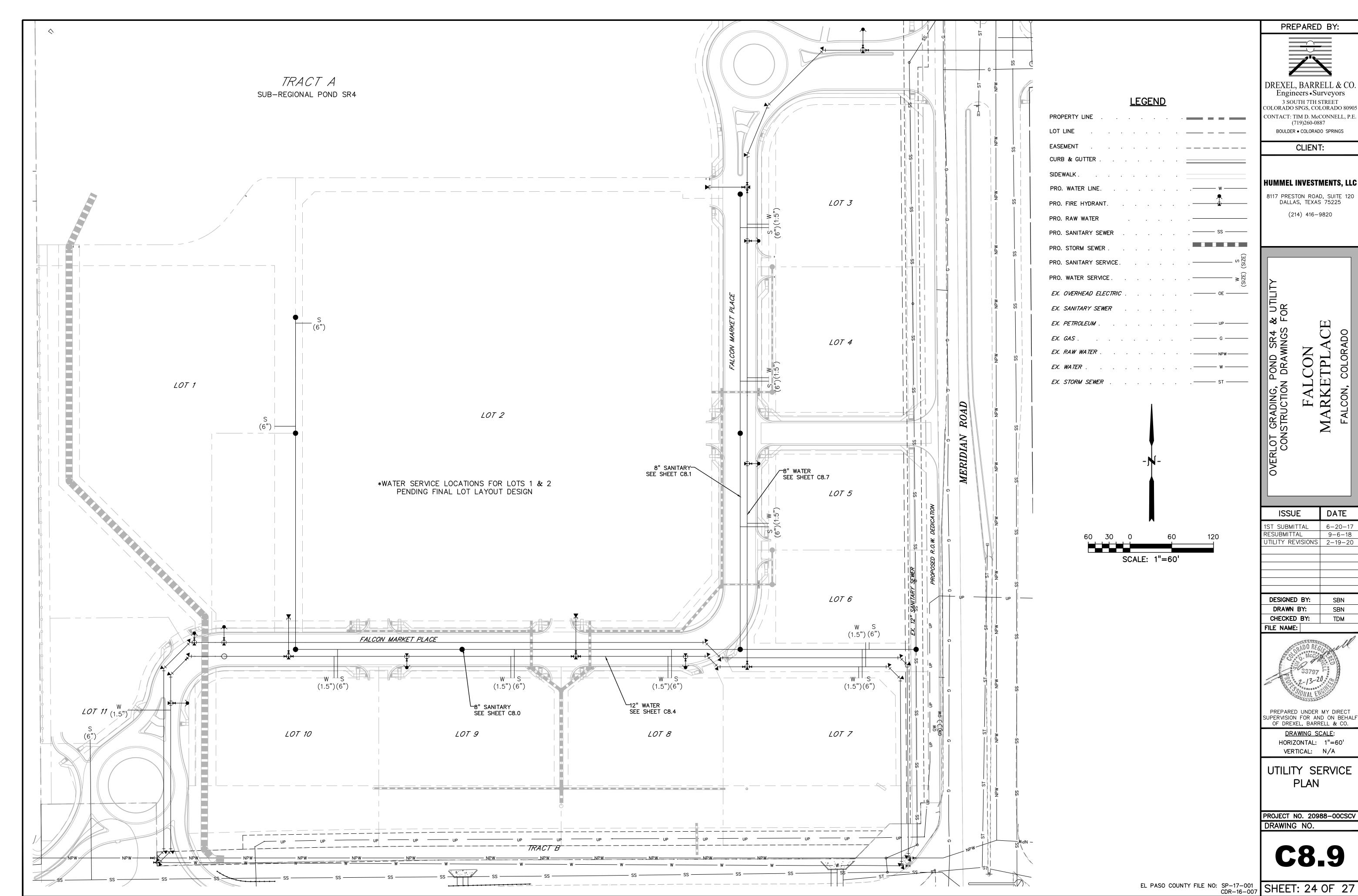
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

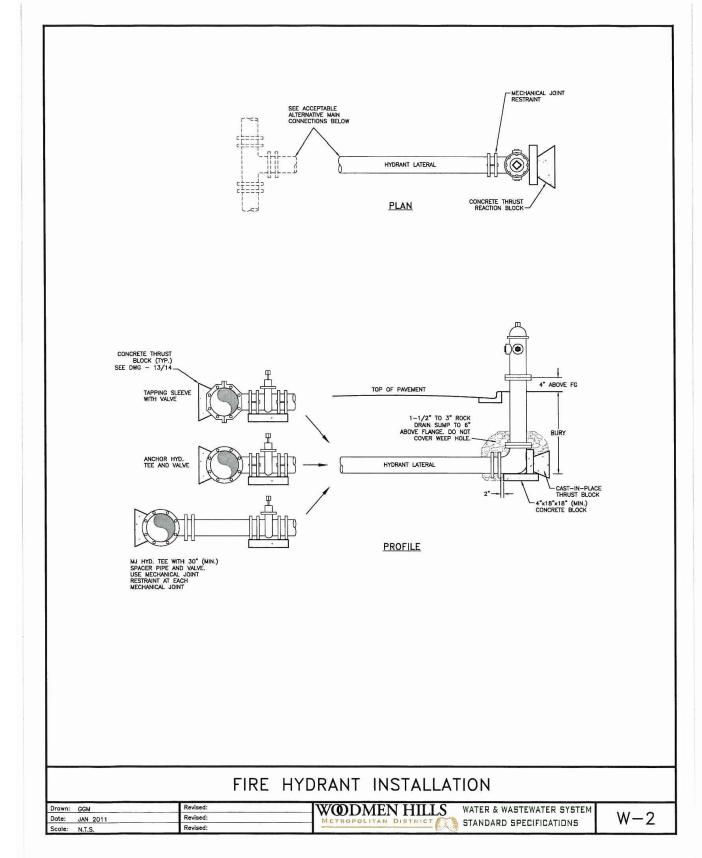
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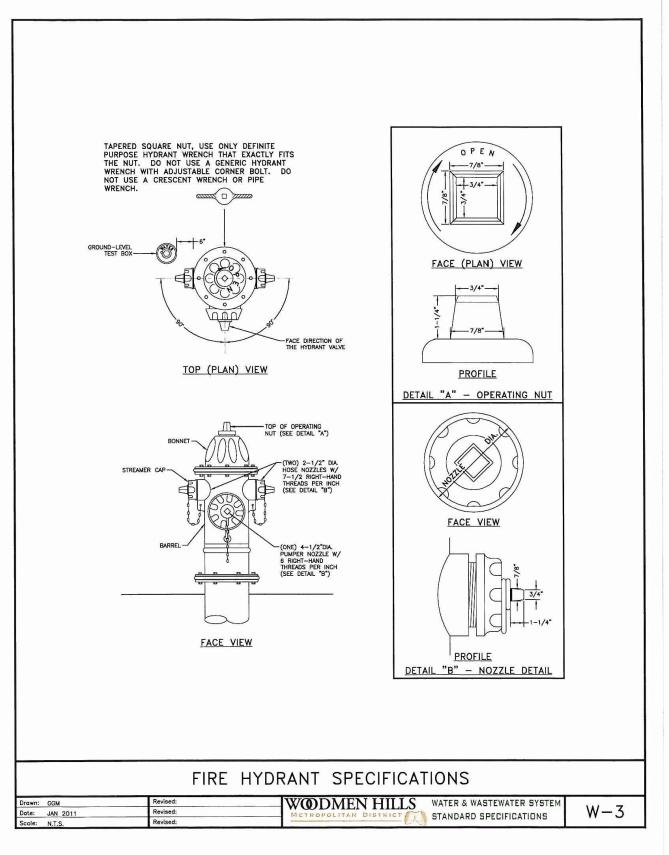
PLAN & PROFILE

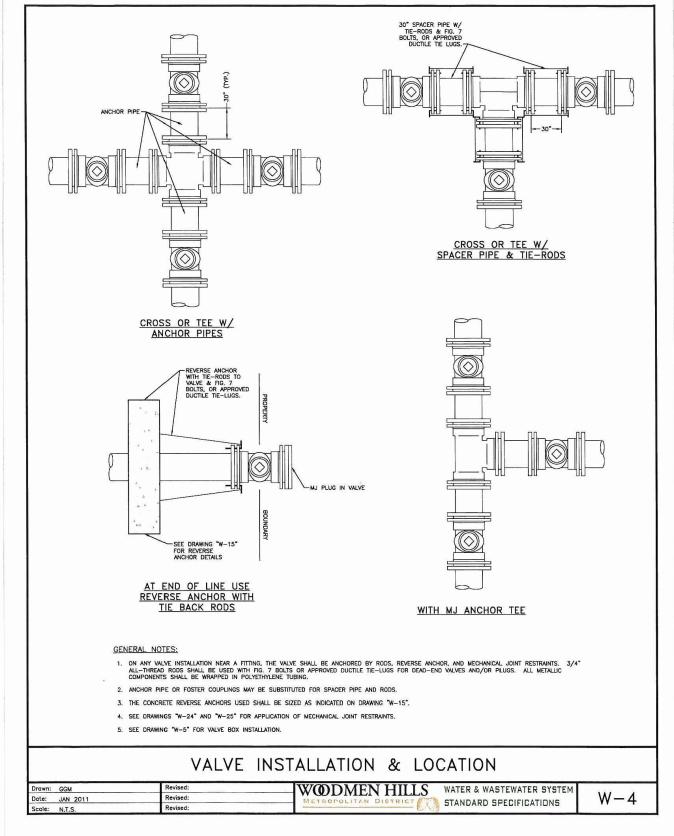
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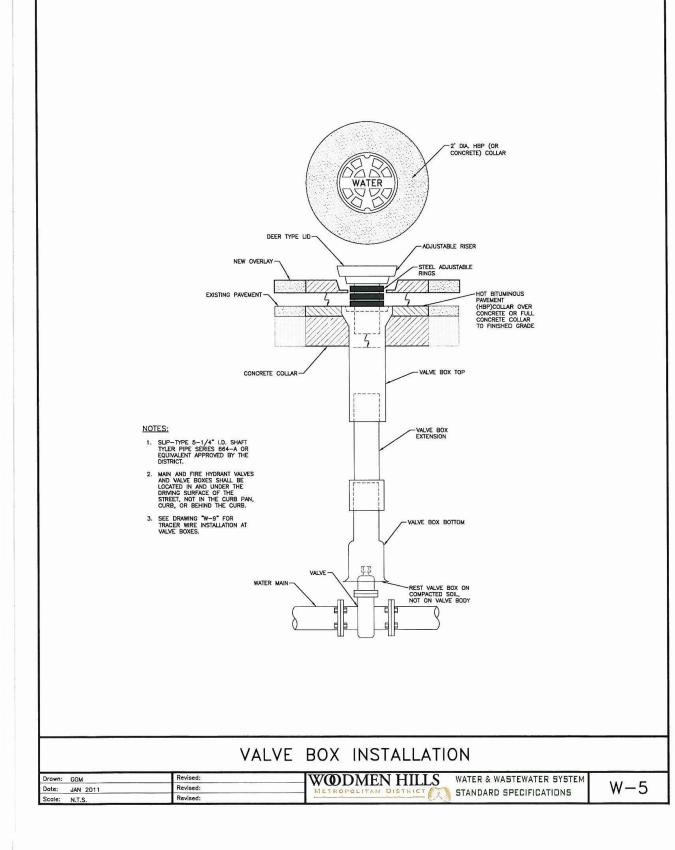
EL PASO COUNTY FILE NO: SP-17-001 CDR-16-007 SHEET: 23 OF 27

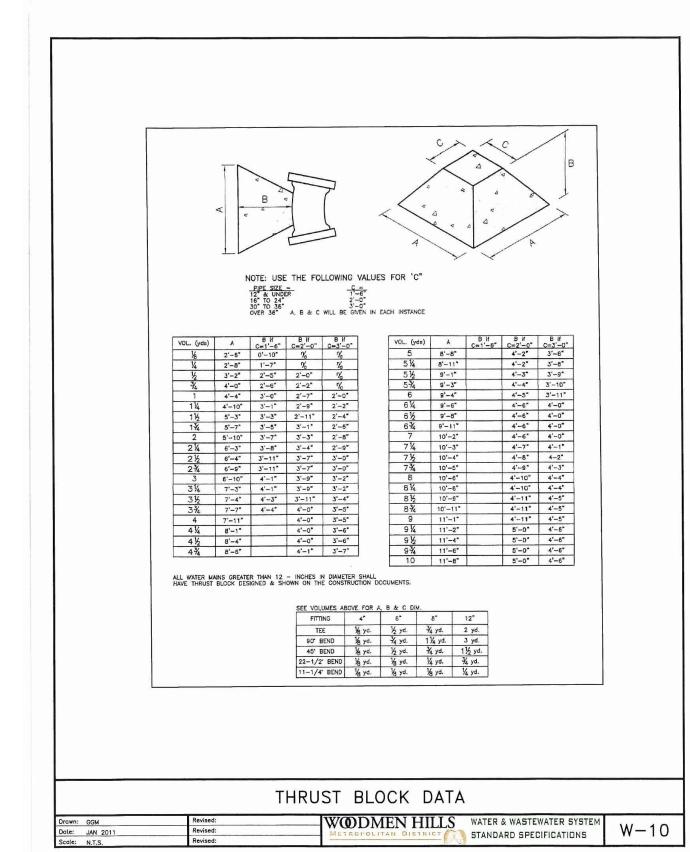


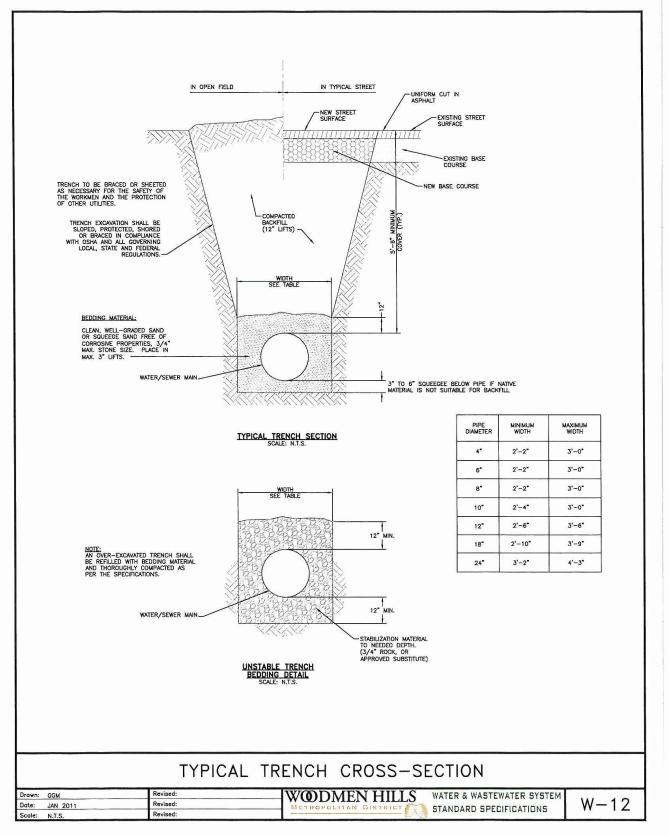


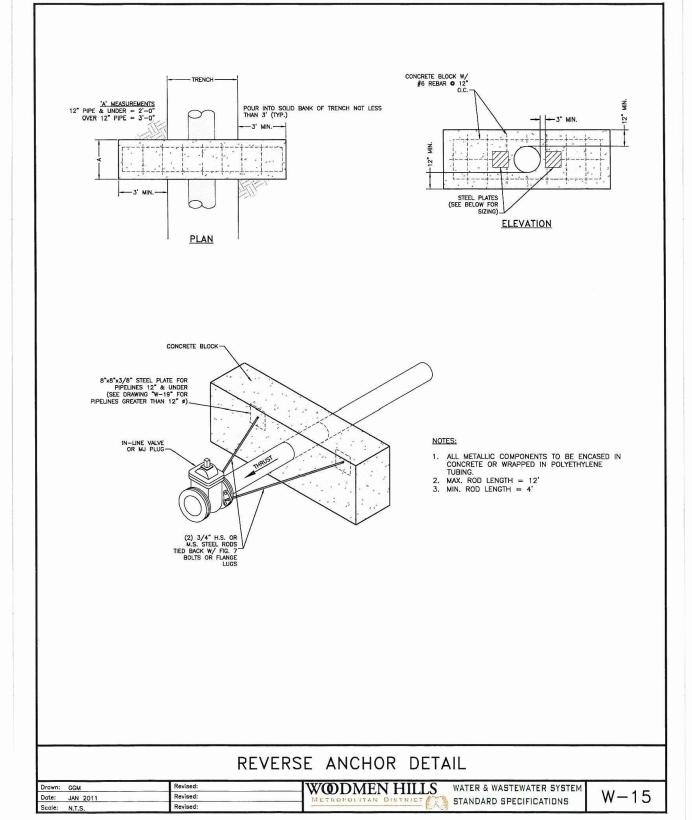


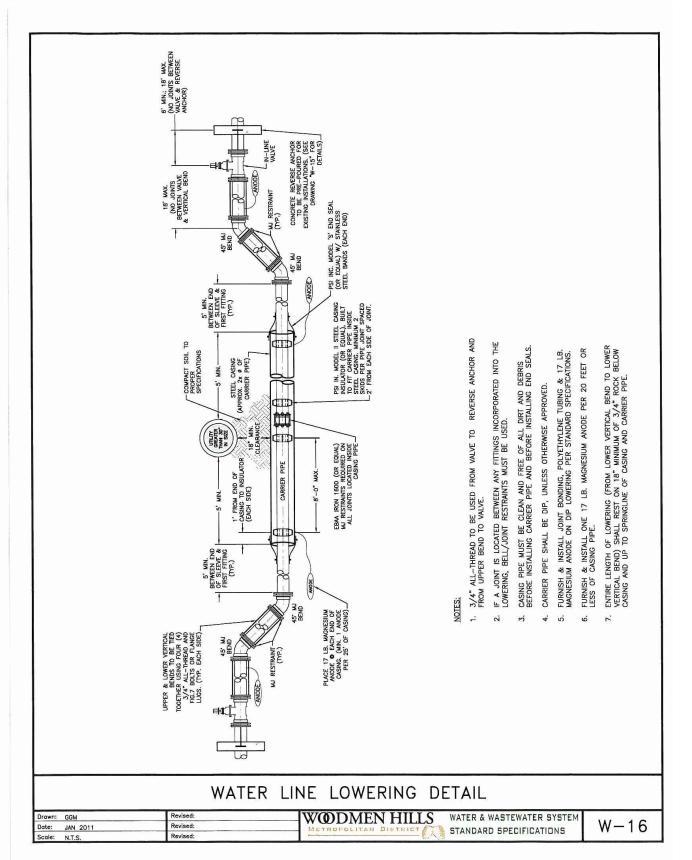


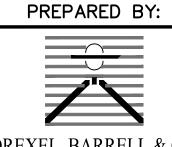












DREXEL, BARRELL & CO. Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 80905 CONTACT: TIM D. McCONNELL, P.E

(719)260-0887 BOULDER • COLORADO SPRINGS

CLIENT:

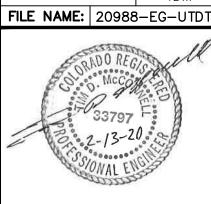
**HUMMEL INVESTMENTS, LLC** 

8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

T GRADING, POND SR4 NSTRUCTION DRAWINGS FALCON (ARKETPL)

ISSUE DATE 1ST SUBMITTAL 6-20-17 RESUBMITTAL 9-6-18 UTILITY REVISIONS 2-19-20 DESIGNED BY: DRAWN BY: CHECKED BY:



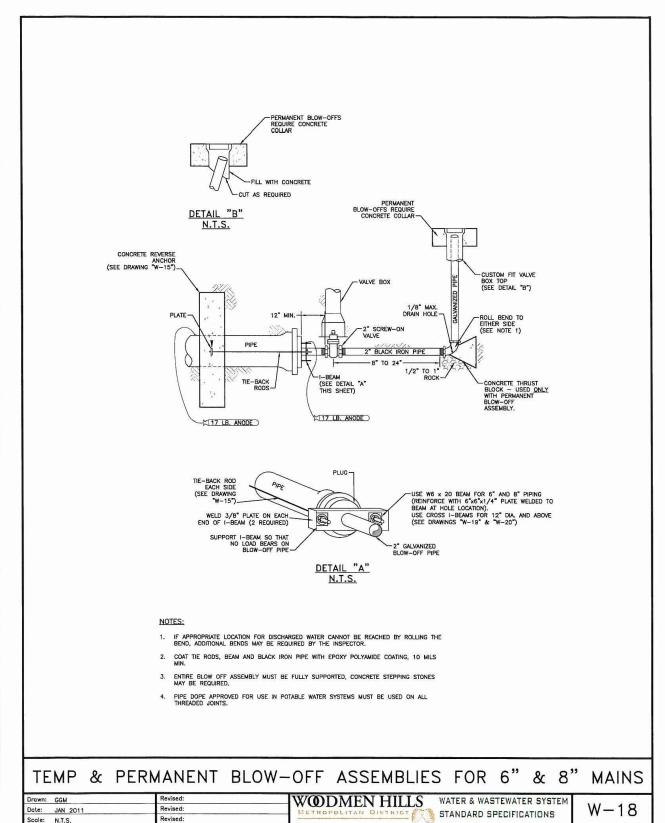
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

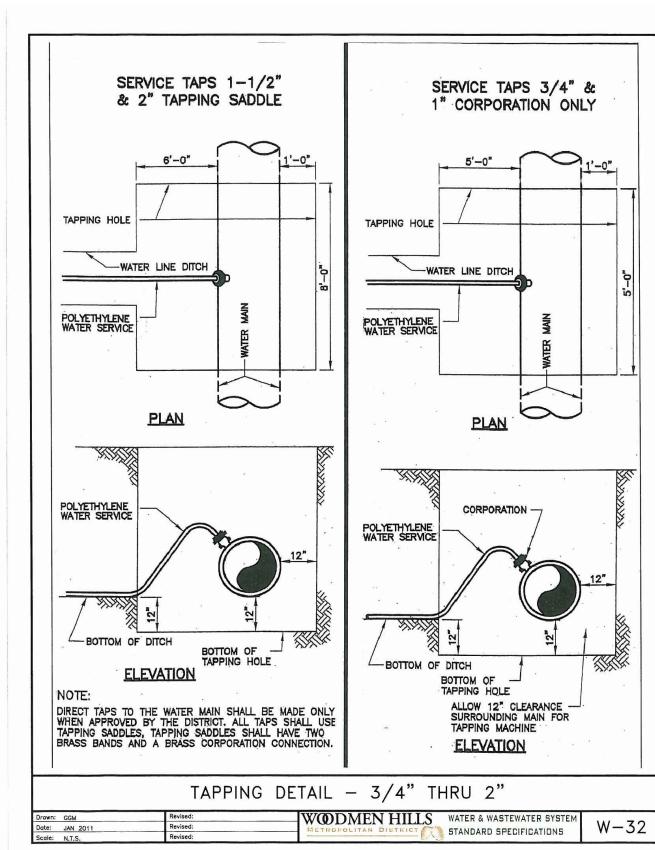
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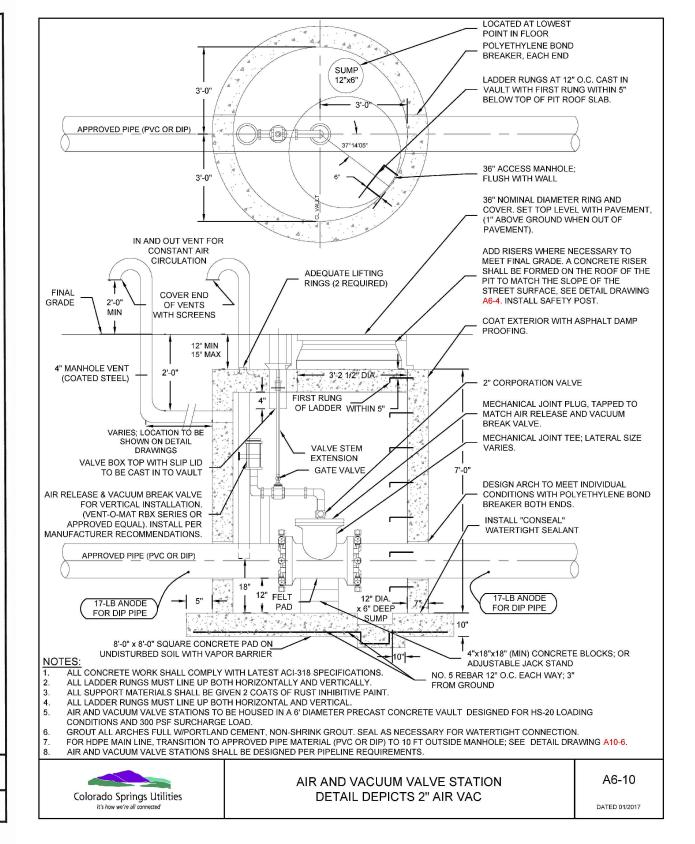
> WATER **DETAILS**

PROJECT NO. 20988-00CSCV DRAWING NO.

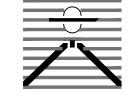
C8.10







PREPARED BY:



DREXEL, BARRELL & CO. Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO 80905 CONTACT: TIM D. McCONNELL, P.E.

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CLIENT:

HUMMEL INVESTMENTS, LLC

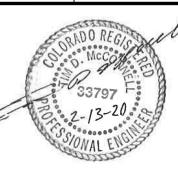
8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

FALCON IARKETPLA

ISSUE DATE 1ST SUBMITTAL RESUBMITTAL 9-6-18 UTILITY REVISIONS 2-19-20

DESIGNED BY: DRAWN BY: CHECKED BY: TDM FILE NAME: 20988-EG-UTDT



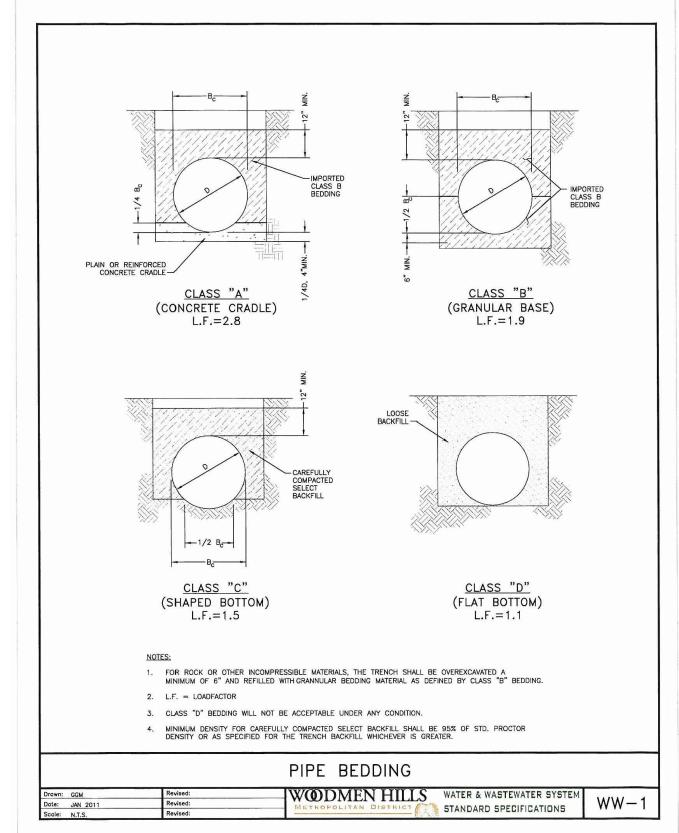
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHAL OF DREXEL, BARRELL & CO.

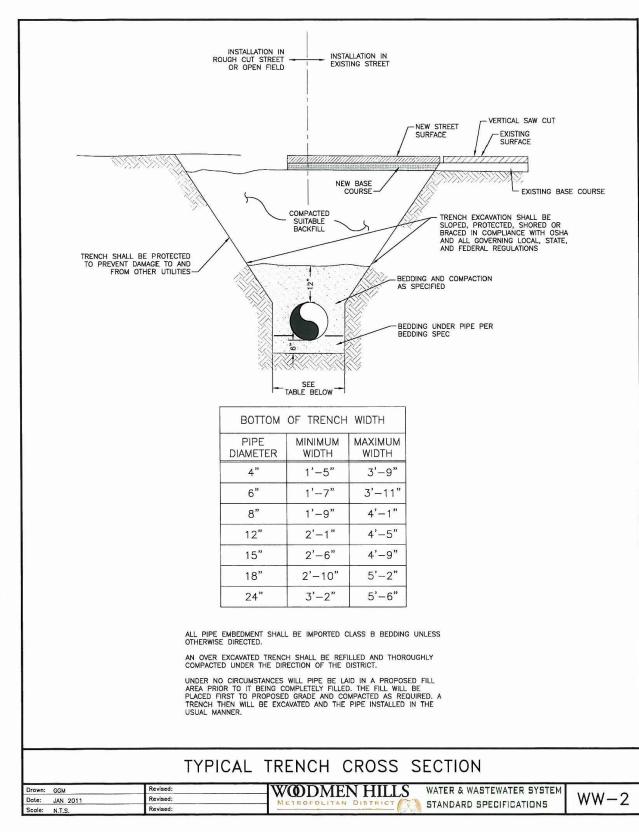
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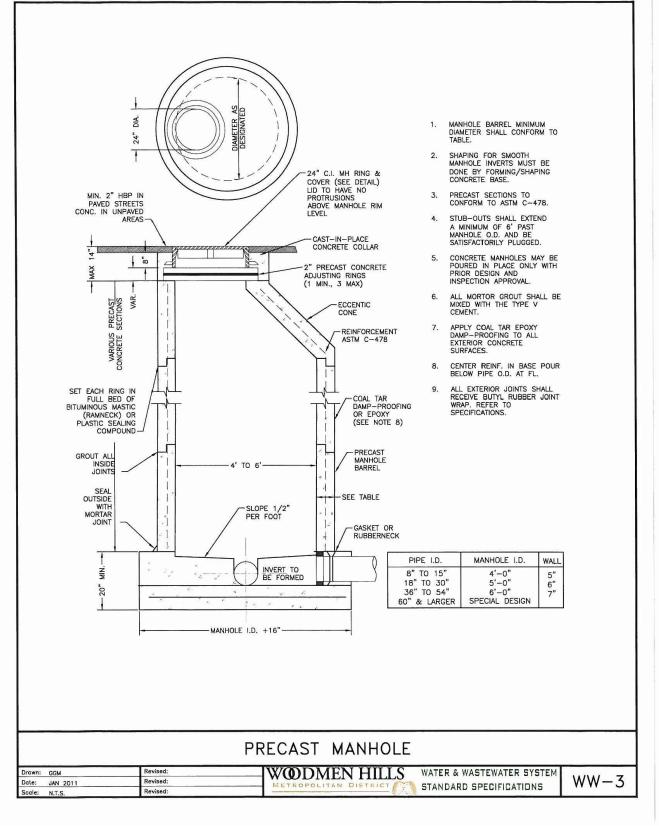
> WATER **DETAILS**

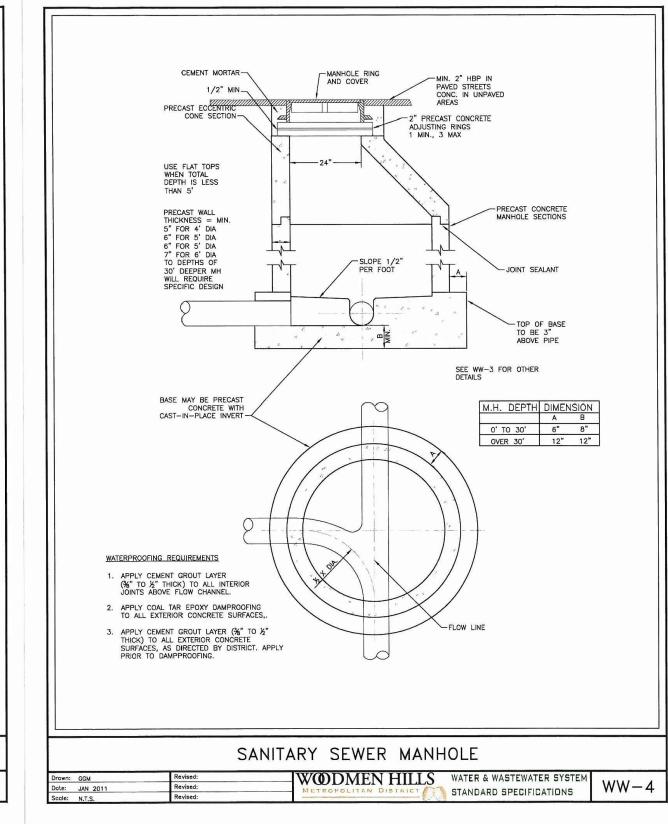
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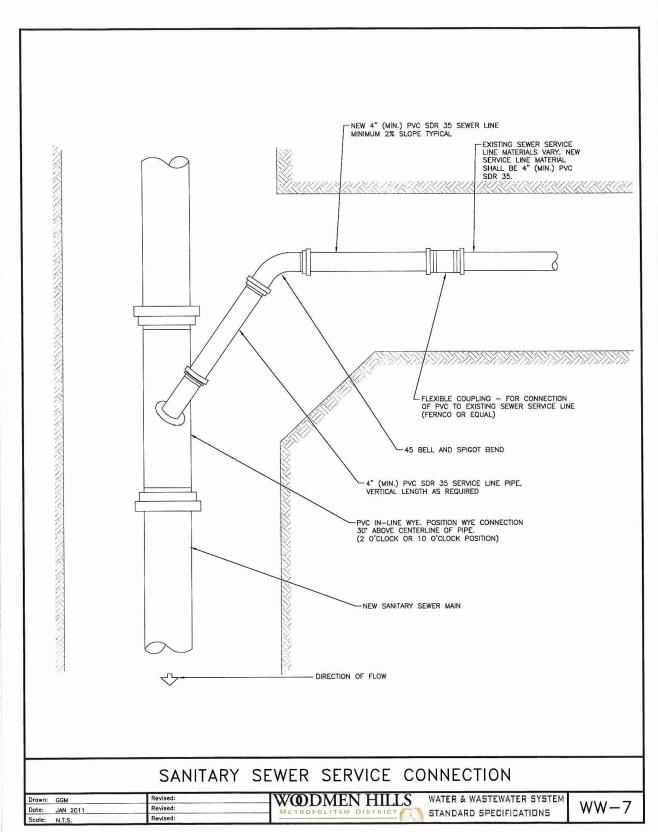
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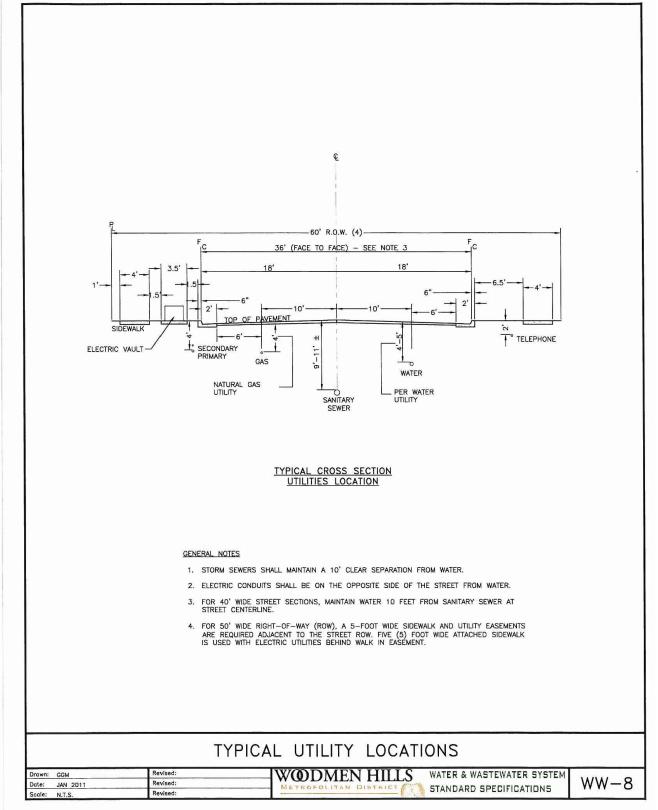


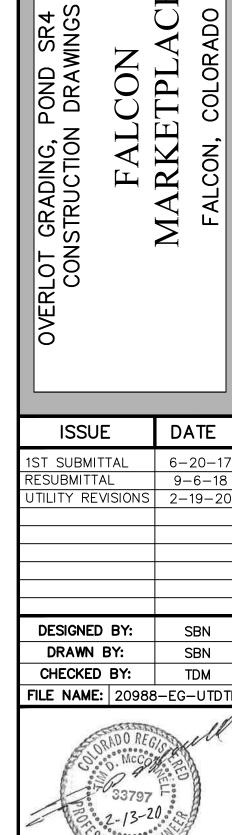












TDM

PREPARED BY:

DREXEL, BARRELL & CO. Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 80905 CONTACT: TIM D. McCONNELL, P.E

(719)260-0887 BOULDER • COLORADO SPRINGS

CLIENT:

HUMMEL INVESTMENTS, LLC

8117 PRESTON ROAD, SUITE 120 DALLAS, TEXAS 75225

(214) 416-9820

C8.12

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALI OF DREXEL, BARRELL & CO.

> DRAWING SCALE: HORIZONTAL: N/A VERTICAL: N/A

SANITARY SEWER

**DETAILS** 

PROJECT NO. 20988-00CSCV

DRAWING NO.