OVERLOT GRADING, POND SR4 & 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

AGENCY CONTACTS

COUNTY — EL PASO COUNTY DEVELOPMENT SERVICES
KARI PARSONS, PROJECT MANAGER/PLANNER II
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, CO 80910
(719) 520–6300

FIRE — FALCON FIRE DEPARTMENT
TRENT HARWIG, FIRE CHIEF
7030 OLD MERIDIAN ROAD
FALCON, CO 80831
(719)495–4050

WATER — WOODMEN HILLS METROPOLITAN DISTRICT
GENE COZZOLINO, DIRECTOR OF WATER & WASTEWATER
8046 EASTONVILLE ROAD
FALCON, CO 80831
(719) 495–2500

WASTEWATER — WOODMEN HILLS METROPOLITAN DISTRICT
GENE COZZOLINO, DIRECTOR OF WATER & WASTEWATER
8046 EASTONVILLE ROAD
FALCON, CO 8083
(719) 495–2500

ELECTRIC — MOUNTAIN VIEW ELECTRIC ASSOCIATION
LES ULFERS
11140 E. WOODMEN ROAD
FALCON, CO 80831
(719) 495–2283

GAS — COLORADO SPRINGS UTILITIES
TODD STURTEVANT
1521 HANCOCK EXPRESSWAY
COLORADO SPRINGS, CO 80947
(719) 668–3556

TELEPHONE — CENTURY LINK
SALLY KLEIN
(719) 636–4329
(LOCATORS) (719) 597–8418
AT&T
(LOCATORS) (719) 635–3674

CABLE — COMCAST
DALE STEWART
213 N. UNION BLVD
COLORADO SPRINGS, CO 80909
(719) 442–4733

PETROLEUM — NUSTAR
CHAD RENSLOW
7810 DRENNAN ROAD
COLORADO SPRINGS, CO 80925
(719) 650–2681

OTHER — 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**

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 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).

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

AREAS
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

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

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NOTE
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
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.

9–27–18

TIM D. MCCONNELL — DATE
P.E.# 33797

OWNER'S STATEMENT
THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

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. — DATE
COUNTY ENGINEER

EL PASO COUNTY FILE NO: SP–17–001
CDR–16–007

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 & UTILITY CONSTRUCTION DRAWINGS FOR
FALCON MARKETPLACE
FALCON, COLORADO

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

DESIGNED BY:	TDM
DRAWN BY:	KGV
CHECKED BY:	TDM
FILE NAME:	20988–EG–CVR

COLORADO REGISTERED TIM D. McCONNELL 33797 9-27-18 PROFESSIONAL ENGINEER

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

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

COVER SHEET

PROJECT NO. 20988–00CSCV
DRAWING NO.
C1.0

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

1. 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 LABELS.

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 REQUIRED.

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:

1. 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.

2. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL SUBMIT IN WRITING A DETAILED PLAN OF OPERATIONS AND SCHEDULE OF COMPLETION.

3. 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.

4. 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.

5. 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.

6. 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.

7. THE OWNER WILL PERFORM QUALITY ASSURANCE TESTING OF SUBGRADE AND MATERIALS. QUALITY CONTROL TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SITE PREPARATION

1. CONTRACTOR SHALL FIELD VERIFY PROFILE GRADES AND ADJUST GRADES WHERE DIRECTED BY THE FIELD ENGINEER.

2. 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.

3. 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.

4. 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.

6. 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.

7. 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.

8. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING.

9. EXISTING TREES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. TREES SHALL NOT BE REMOVED UNLESS AUTHORIZED BY THE OWNER/FIELD ENGINEER.

10. 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:

1. 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.

2. EXCAVATIONS SHALL BE GRADED AND PROPERLY MAINTAINED TO PROVIDE ADEQUATE DRAINAGE AT TALL TIMES. WORK SHALL BE SUSPENDED WHEN THE SITE IS OVERLY WER, MUDDY, OR OTHERWISE UNSUITABLE FOR PROPER MAINTENANCE. IN EXCAVATIONS WHERE SOIL LINER FILL IS TO BE PLACED ON SLOPES STEEPER THAN 3H:1V, HORIZONTAL BENCHES SHALL BE EXCAVATED INTO THE SLOPE TO ALLOW FILL TO BE PLACED IN HORIZONTAL LIFTS AND TO ELIMINATE POTENTIAL WEAK INTERFACES BETWEEN THE FILL AND NATIVE GROUND. EMBANKMENT MATERIAL SHALL BE CONTINUOUSLY BENCHED AND KEYED INTO THE EXISTING MATERIAL A MINIMUM OF 2 FEET.

3. 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.

4. SOIL FILL LINER SHOULD BE PLACED AND COMPACTED TO ACHIEVE A COEFFICIENT OF PERMEABILITY OF LESS THAN 1X10–8 CM/SEC.

UTILITY

1. 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 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. THE CONTRACTOR SHALL PROTECT ALL EXISTING AND NEW UTILITIES IN THE VICINITY OF HIS WORK. IF 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.

2. 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.

3. 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.

4. THE CONTRACTOR SHALL ADJUST ANY VALVES OR MANHOLES OF EXISTING UTILITIES NOT TO BE RELOCATED TO THE PROPOSED GRADE. THE COST SHALL BE INCLUDED IN THE PRICE OF THE WORK.

5. A REPRESENTATIVE OF EL PASO COUNTY IS REQUIRED TO BE ON SITE DURING EXCAVATION AND CONSTRUCTION AROUND UNDERGROUND FACILITIES. IT IS THE CONSTRUCTION CONTRACTOR'S RESPONSIBILITY TO NOTIFY EL PASO COUNTY 48 HOURS PRIOR TO CONSTRUCTION.

6. ALL PIPES INSTALLED ON THE PROJECT SHALL BE PAID FOR "COMPLETE IN PLACE". TRENCH EXCAVATION, BEDDING, BACKFILL, ECT. WILL NOT BE PAID FOR SEPARATELY.

EARTHWORK

1. 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 SHALL BE INCLUDED IN THE WORK.

2. 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 SEPARATELY.

3. 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 WHEEL LOADS SHALL BE REMOVED AND REPLACED TO ACHIEVE A STABLE SUBGRADE PRIOR TO PAVING. PROOF ROLLING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

4. 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

5. 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.

EL PASO COUNTY FILE NO: SP–17–001
CDR–16–007

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED TIMOTHY McCONNELL 33797 9-27-18 PROFESSIONAL ENGINEER

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

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

NOTES

PROJECT NO. 20988–00CSCV

DRAWING NO.

C1.1

NOTE

1. GRADING IS NOT PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY DURING THE INTERIM CONDITION, EXCEPT FOR THE OPEN CHANNEL ALONG E. WOODMEN RD.
2. EXISTING SITE IS 90% VEGETATED WITH NATURAL NATIVE GRASSES.
3. NO RETAINING WALLS ARE PROPOSED AT THE INTERIM CONDITION.

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 33797 9-27-18

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

DRAWING SCALE:
HORIZONTAL: 1"=60'
VERTICAL: N/A

INTERIM GRADING & EROSION CONTROL PLAN

PROJECT NO. 20988-00CSCV

DRAWING NO.

C2.0

SHEET: 3 OF 27

KEY MAP
NTS

SCALE: 1"=60'

LEGEND

PROPERTY LINE	
PROPOSED INTERMEDIATE CONTOUR	
PROPOSED INDEX CONTOUR	6245
EX. INTERMEDIATE CONTOUR	
EX. INDEX CONTOUR	6245
LIMITS OF DISTURBANCE/CONSTRUCTION	
PROPOSED STORM SEWER	
PROPOSED STORM INLET	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST
TEMPORARY SWALE	
DIRECTION OF FLOW	
SILT FENCE	SF
CONSTRUCTION FENCE	CF
VEHICLE TRACKING CONTROL	VTC
EROSION CONTROL BLANKET (FOR AREAS WITH SLOPE > 3:1)	ECB
STRAW BALE CHECK DAM	CD
CONCRETE WASHOUT AREA	CWA
SURFACE ROUGHENING	SR
TEMPORARY SEEDING & MULCHING	SM
STABILIZED STAGING AREA	SSA
TEMPORARY SEDIMENT BASIN	TSB

NOTE

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

ISSUE	DATE
1ST SUBMITTAL	6-20-17
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DESIGNED BY:	TDM
DRAWN BY:	KGV
CHECKED BY:	TDM
FILE NAME:	

COLORADO REGISTERED TIMOTHY D. McCONNELL 33797 9-27-18 PROFESSIONAL ENGINEER

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

DRAWING SCALE:
HORIZONTAL: 1"=60'
VERTICAL: N/A

INTERIM GRADING & EROSION CONTROL PLAN

PROJECT NO. 20988-00CSCV

DRAWING NO.

C2.1

SHEET: 4 OF 27

Surface Roughening (SR) EC-1

SR–1. SURFACE ROUGHENING
FOR STEEP SLOPES (3:1 OR STEEPER)

SR–2. SURFACE ROUGHENING
FOR LOW SLOPES (LESS THAN 3:1)

Temporary and Permanent Seeding (TS/PS) (SM) EC-2

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[a] (Common name)	Growth Season[b]	Pounds of Pure Live Seed (PLS)/acre[c]	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	½
5. Millet	Warm	3 - 15	½ - ¼
6. Sudangrass	Warm	5–10	½ - ¼
7. Sorghum	Warm	5–10	½ - ¼
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

[a] 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.

[b] See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

[c] Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

MULCHING NOTES

INSTALLATION REQUIREMENTS

1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.

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.

3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN 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 PER ACRE.

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 TACKIFIER.

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

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.

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 (SM) | Figure MU-1 Mulching — Construction Detail and Maintenance Requirements

City of Colorado Springs Storm Water Quality (ECB) | Figure ECB-1 Erosion Control Blanket — Application Examples

DENVM153722:CS:CBM\gECB:1/9/99

EC-2 Temporary and Permanent Seeding (TS/PS)

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

	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
Seeding Dates	**Warm**	**Cool**	**Warm**	**Cool**
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

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 Fact Sheet for additional guidance.

Maintenance and Removal

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.

SILT FENCE

SILT FENCE NOTES

INSTALLATION REQUIREMENTS

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.

3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.

4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY 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 2' ABOVE THE ORIGINAL GROUND SURFACE.

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 AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.

7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

MAINTENANCE REQUIREMENTS

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 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.

City of Colorado Springs Stormwater Quality (SF) | Figure SF-2 Silt Fence — Construction Detail and Maintenance Requirements

Sediment Basin (SB) SC-7

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%			

City of Colorado Springs Storm Water Quality (ECB) | Figure ECB-2 Erosion Control Blanket — Installation Requirements

DENVM153722:CS:CBM\gECB:2/9/99

EL PASO COUNTY FILE NO: SP–17–001
CDR–16–007

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

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

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

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

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

EROSION CONTROL DETAILS

PROJECT NO. 20988–00CSCV
DRAWING NO.
C2.2

SHEET: 5 OF 27

Sediment Control Log (SCL) SC-2

TRENCHED SEDIMENT CONTROL LOG

SECTION Ⓐ
TRENCHED SEDIMENT CONTROL LOG

LOG JOINTS

SCL-1, TRENCHED SEDIMENT CONTROL LOG

BLOCK AND GRAVEL BAG*CURB INLET PROTECTION
NTS

BLOCK AND GRAVEL BAG*CURB INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.

2. CONCRETE BLOCKS ARE TO BE LAID AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES, ABUTTING ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK FACING OUTWARD.

3. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS CLOSELY ABUTTING ONE ANOTHER SO THERE ARE NO GAPS.

4. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER.

5. BAGS ARE TO BE MADE OF 1/4" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.

2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.

3. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE TRAP.

4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

* AN ALTERNATE 3/4" TO 1" GRAVEL FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.

City of Colorado Springs Stormwater Quality	IP	Figure IP-3 Block & Gravel Bag Curb Inlet Protection Construction Detail and Maintenance Requirements

STRAW BALE INLET PROTECTION
NTS

STRAW BALE INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.

2. BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.

3. SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.

2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.

3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality	IP	Figure IP-2 Straw Bale Inlet Protection Construction Detail and Maintenance Requirements

CHECK DAM
NTS

CHECK DAM NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.

2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.

2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.

3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.

3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.

4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality	Figure CD-1 Check Dam Construction Detail and Maintenance Requirements

Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

City of Colorado Springs Storm Water Quality	Figure VT-1 Vehicle Tracking Application Examples

DEN/M153722.CS.CB/FIgVT-1/9-99 VTC

VEHICLE TRACKING
NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.

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 EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.

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 SEWER DRAINS.

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.

City of Colorado Springs Stormwater Quality	Figure VT-2 Vehicle Tracking Application Examples VTC

SC-5 Rock Sock (RS)

ROCK SOCK SECTION ROCK SOCK PLAN

ROCK SOCK JOINTING

GRADATION TABLE

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 - 100
1"	20 - 55
½"	0 - 15
⅜"	0 - 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION(S) OF ROCK SOCKS.

2. CRUSHED ROCK SHALL BE ½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (½" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", 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 MESH FOR THE ROCK ENCLOSURE.

RS-1, ROCK SOCK PERIMETER CONTROL

Rock Sock (RS) SC-5

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 EROSION, AND PERFORM NECESSARY MAINTENANCE.

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

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 BEYOND REPAIR.

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 ½ 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.

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.

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

PREPARED BY:

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DALLAS, TEXAS 75225
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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER TIMOTHY D. McCONNELL 33797 9-27-18

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

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

EROSION CONTROL DETAILS

PROJECT NO. 20988-00CSCV

DRAWING NO.

C2.3

SHEET: 6 OF 27

LEGEND

- PROPERTY LINE
- LOT LINE
- EASEMENT
- CURB & GUTTER
- SIDEWALK
- PRO. WATER LINE
- PRO. FIRE HYDRANT
- PRO. RAW WATER
- PRO. SANITARY SEWER
- PRO. STORM SEWER
- EX. OVERHEAD ELECTRIC — OE
- EX. SANITARY SEWER — SS
- EX. PETROLEUM — UP
- EX. GAS — G
- EX. RAW WATER — RW
- EX. WATER — W
- EX. STORM SEWER — ST

50 0 50 100

SCALE: 1"=50'

KEY MAP
NTS

POND #1 (SR4) OUTFALL TO OPEN CHANNEL

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED TIMOTHY D. McCONNELL 33797 9-27-18 PROFESSIONAL ENGINEER

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

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

STORM SEWER PLAN & PROFILE

PROJECT NO. 20988-00CSCV

DRAWING NO.

C7.0

SHEET: 7 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	
PRO. FIRE HYDRANT	
PRO. RAW WATER	
PRO. SANITARY SEWER	
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	RW
EX. WATER	W
EX. STORM SEWER	ST

SCALE: 1"=50'

OPEN CHANNEL ALONG E. WOODMEN ROAD

Know what's **below.**
Call before you dig.

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
CDR-16-007

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER TIMOTHY D. McCONNELL 33797 9-27-18

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

STORM SEWER PLAN & PROFILE

PROJECT NO. 20988-00CSCV

DRAWING NO.

C7.1

SPILLWAY SECTION A1–A1
NO SCALE

SPILLWAY SECTION A2–A2
NO SCALE

TRICKLE CHANNEL SECTION B1–B1
NO SCALE

KEY MAP
NTS

LEGEND

- PROPERTY LINE
- LOT LINE
- CURB & GUTTER
- SIDEWALK
- PRO. WATER LINE
- PRO. FIRE HYDRANT
- PRO. RAW WATER
- PRO. SANITARY SEWER
- PRO. STORM SEWER
- EX. OVERHEAD ELECTRIC — OE
- EX. SANITARY SEWER — SS
- EX. GAS — G

POND LINING
NO SCALE

POND LINING INTERFACE
NO SCALE

THIS SECTION C1–C1 APPLIES TO ALL AREAS OF MAINTENANCE ROAD EXCEPT THAT PORTION DETAILED BY SECTION C2–C2

MAINTENANCE ROAD SECTION C1–C1
NO SCALE

THIS SECTION C2–C2 REFERS TO A PORTION OF MAINTENANCE ROAD BEGINNING AT THE EAST EDGE OF THE GROUTED RIPRAP FOR A LENGTH OF 250–LF EAST ALONG THE NORTH PROPERTY LINE

MAINTENANCE ROAD SECTION C2–C2
NO SCALE

STABILIZED ACCESS SECTION D1–D1
NO SCALE

EL PASO COUNTY FILE NO: SP–17–001
CDR–16–007

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

ISSUE	DATE
1ST SUBMITTAL	6–20–17
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CHECKED BY:	TDM
FILE NAME:	

COLORADO REGISTERED TIMOTHY D. McCONNELL 33797 9-27-18 PROFESSIONAL ENGINEER

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

DRAWING SCALE:
HORIZONTAL: 1"=40'
VERTICAL: N/A

SUB–REGIONAL POND #1 (SR4)

PROJECT NO. 20988–00CSCV

DRAWING NO.

C7.2

NORTHWEST DRAIN PLAN
1"=10'

NORTHWEST DRAIN PROFILE
1"=20'

FOREBAY BAFFLE ENERGY DISSIPATORS
NO SCALE

EAST FOREBAY
NO SCALE

NORTHWEST FOREBAY
NO SCALE

NORTHWEST RIPRAP APRON
NO SCALE

EL PASO COUNTY FILE NO: SP–17–001
CDR–16–007

PREPARED BY:

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 33797 9-27-18

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

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

POND #1 (SR4) DETAILS

PROJECT NO. 20988–00CSCV
DRAWING NO.

C7.3

SHEET: 10 OF 27

GROUTED SLOPED BOULDER STRUCTURE

NO SCALE

GROUT WALL CONNECTION TRENCHED VERTICAL WALL UPSTREAM OF DROP

SOIL RIPRAP

N.T.S

20 0 20 40

SCALE: 1"=20'

CREST PROFILE

PREPARED BY:

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED TIMOTHY D. McCONNELL 33797 9-27-18 PROFESSIONAL ENGINEER

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

DRAWING SCALE:
HORIZONTAL: 1"=20'
VERTICAL: N/A

POND #1 (SR4) GROUTED DROP DETAILS

PROJECT NO. 20988-00CSCV

DRAWING NO.

C7.4

SHEET: 11 OF 27

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

ELEVATION
PERFORATED PLATE DETAIL
NO SCALE

ELEVATION
TRASH RACK
NO SCALE

POND OUTLET PROFILE SECTION D-D
NO SCALE

POND OUTLET
NO SCALE

PERFORATED PLATE NOTES:

1. PROVIDE NEOPRENE GASKET MATERIAL OR GROUT BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE @ 12" MAX. ON CENTER. ORIFICE PLATE IS TO BE REMOVABLE.
3. ALL NON STAINLESS STEEL SURFACES ARE TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND.

SECTION A-A
NO SCALE

SECTION B-B
NO SCALE

SECTION C-C
NO SCALE

TWO STEEL GRATE PER INLET QUANTITIES

NO. PIECES	DESCRIPTION	LENGTH	LBS PER FT.	WEIGHT (LBS.)
8	54 x 7.7 BEAM	40"	7.70	206
4	3 1/2" x 1/4" FLAT	26 5/8"	2.98	26
4	3" x 1/4" FLAT	26 5/8"	2.55	24
TOTAL LBS. - 256				

OUTLET PIPE INSIDE DIA. FT. - "D"	MIN. "H" FT.
1.5	3.0
2.0	3.5
2.5	4.0
3.0	4.5
3.5	5.0

GENERAL NOTES

1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. SEE PLANS FOR SIZE AND LOCATION OF PIPE.
3. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
4. STANDARD INLET GRATES SHALL BE USED ON ALL TYPE D INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
5. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FT.-6 IN. AND SHALL CONFORM WITH AASHTO M 199.
6. REINFORCING BARS SHALL BE EPOXY COATED AND DEFORMED #4, AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE. CUT OR BEND BARS AROUND PIPE AS REQUIRED.

"H" FT.	CONCRETE CU. YDS.	STEEL LBS.	CIRCULAR PIPE RANGE INSIDE DIA., IN. - "D"
3.0	1.5	127	18
3.5	1.7	149	18-24
4.0	1.9	157	18-30
4.5	2.0	179	18-36
5.0	2.2	187	18-42
5.5	2.4	208	18-42
6.0	2.6	215	18-42
6.5	2.8	236	18-42
7.0	2.9	243	18-42
7.5	3.1	264	18-42
8.0	3.3	271	18-42
8.5	3.5	292	18-42
9.0	3.6	299	18-42
9.5	3.8	320	18-42
10.0	4.0	327	18-42

CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

QUANTITIES FOR ONE INLET

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Creation Date: 07/04/06	Initials: SJR
Last Modification Date: 07/04/06	Initials: LTA
Full Path: www.dot.state.co.us/DesignSupport/	
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Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
4201 East Arkansas Avenue
Denver, Colorado 80222
Phone: (303) 757-9083
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Project Development Branch SRJ/LTA

INLET, TYPE D

Issued By: Project Development Branch on July 04, 2006

STANDARD PLAN NO.
M-604-11
Sheet No. 1 of 1

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

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

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

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

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

POND #1 (SR4) DETAILS

PROJECT NO. 20988-00CSCV
DRAWING NO.
C7.5

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

SHEET: 12 OF 27

OPEN CHANNEL SECTION B–B (SHEET C7.1)
NO SCALE

HEADWALL & WINGWALL DETAIL
NO SCALE

CHECK DAM SECTION C–C (SHEET C7.1)
NO SCALE

CHECK DAM SECTION A–A
NO SCALE

RIPRAP APRON AT 96" OUTFALL SECTION A–A (SHEET C7.1)
NO SCALE

GENERAL NOTES

1. CONCRETE SHALL BE CLASS B.
2. HEADWALL SHALL BE PERPENDICULAR TO THE PIPE & UNLESS OTHERWISE SHOWN ON THE PLANS. TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
3. FOR WINGWALL DETAILS, SEE STANDARD PLAN M-601-20.
4. VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
6. ALL REINFORCING BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.
- ▲ WHEN TWO OR MORE PIPES ARE LAID SIDE BY SIDE, THEY SHALL BE PLACED SO THE CLEAR BOUNDARY PIPES WILL BE ½ INSIDE DIAMETER (MINIMUM 12 IN.), INSIDE OF WALL OR 3 FT. APART (INCLUDING WALL THICKNESS), WHICHEVER IS LESS.
- ■ ADD 0.89 x CY OR 9.0 LB.) WHEN APRON IS REQUIRED.

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Creation Date: 07/04/12	Initials: DD
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CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

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Project Development Branch DD/LTA

HEADWALL FOR PIPES

STANDARD PLAN NO. M-601-10

Sheet No. 1 of 1

Issued By: Project Development Branch July 4, 2012

SKEW ANGLE A°	90	85	80	75	70	65	60	55	50	45	40	35	30
F FACTOR (COSECA²)	1.000	1.004	1.015	1.035	1.064	1.103	1.155	1.221	1.305	1.414	1.556	1.743	2.000

SKEW FACTOR TABLE

Computer File Information	
Creation Date: 07/04/12	Initials: DD
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Date:	Comments

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Project Development Branch DD/LTA

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20

Sheet No. 1 of 1

Issued By: Project Development Branch July 4, 2012

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER TIM D. McCONNELL 33797 9-27-18

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

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

OPEN CHANNEL DETAILS

PROJECT NO. 20988-00CSCV

DRAWING NO.

C7.6

SHEET: 13 OF 27

CONCRETE CUTOFF WALL SECTION

NO SCALE

RIPRAP OUTLET PROTECTION AT EXISTING CULVERTS
SECTION B-B & E-E (SHEET C7.1)

NO SCALE

NOTE

TYPE III MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE FOLLOWING CONDITIONS ARE MET:

A. PIPE IS 48" OR LARGER INSIDE DIAMETER.
B. NOT CHANGE IN PIPE SIZE
C. NO CHANGE IN PIPE MATERIAL
D. NO CHANGE IN HORIZONTAL ALIGNMENT
E. SLOPE IS FLAT AND CONTINUOUS

2. TYPE III MANHOLES SHALL BE FABRICATED BY THE MANUFACTURER/SUPPLIER AND DELIVERED TO THE SITE AS A SINGLE UNIT. FIELD FABRICATION SHALL NOT BE PERMITTED.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED. LOWEST STEP SHALL BE A MAXIMUM OF 30" ABOVE THE INVERT OF THE PIPE.

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Detail Type III Standard Drawing REVISION DATE: 11/10/04 FILE NAME: SD_3-3	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

POND #2 OUTFALL TO OPEN CHANNEL
SECTION D-D (SHEET C7.1)

NO SCALE

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

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FALCON MARKETPLACE

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

STORM SEWER DETAILS

PROJECT NO. 20988-00CSCV

DRAWING NO.

C7.7

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

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH CURRENT WOODMEN HILLS METROPOLITAN DISTRICT (WHMD, THE DISTRICT) SPECIFICATIONS.
2. 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.
3. ALL STATIONING IS CENTER LINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTER LINE UNLESS OTHERWISE NOTED.
4. 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.
5. 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.
6. 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.
7. 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 EACH FITTING.
8. 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.
9. 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.
10. 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 REQUESTED.
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 AND APPROVAL.
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.

9-4-18

BEN HUMMEL — DATE
LG HI FALCON, LLC
3953 MAPLE AVE, #290
DALLAS, TX 75219

FIRE AUTHORIY APPROVAL

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

SIGNED _____ DATE 9-17-2018
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: 9-26-18 BY: _____ Approved with Red Lines

PROJECT NO. _____

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: 9-26-18 BY: _____ Approved with Red Lines

PROJECT NO. _____

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).

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

PREPARED BY:

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COLORADO SPGS, COLORADO 80905
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BOULDER • COLORADO SPRINGS

CLIENT:

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

OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

DESIGNED BY:	TDM
DRAWN BY:	KGV
CHECKED BY:	TDM
FILE NAME:	20988-UT-CVR

COLORADO REGISTERED PROFESSIONAL ENGINEER TIMOTHY D. McCONNELL 25797 9-4-18

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

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

UTILITY COVER SHEET

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.0

LEGEND

- PROPERTY LINE
- LOT LINE
- EASEMENT
- CURB & GUTTER
- SIDEWALK
- PRO. WATER LINE
- PRO. FIRE HYDRANT
- PRO. RAW WATER
- PRO. SANITARY SEWER
- PRO. STORM SEWER
- EX. OVERHEAD ELECTRIC
- EX. SANITARY SEWER
- EX. PETROLEUM
- EX. GAS
- EX. RAW WATER
- EX. WATER
- EX. STORM SEWER

KEY MAP
NTS

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

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

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

SANITARY SEWER PLAN & PROFILE

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.1

SHEET: 16 OF 27

EAST SANITARY

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	RW
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	RW
EX. WATER	W
EX. STORM SEWER	ST

50 20 0 50 100

SCALE: 1"=50'

KEY MAP
NTS

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 33797

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

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

SANITARY SEWER PLAN & PROFILE

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.2

SHEET: 17 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	NPW
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST

KEY MAP
NTS

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED TIMOTHY D. McCONNELL 32797 9-6-18 PROFESSIONAL ENGINEER

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

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

RAW WATER PLAN & PROFILE

PROJECT NO. 20988-00CSCV
DRAWING NO.

C8.3

SHEET: 18 OF 27

LEGEND

- PROPERTY LINE
- LOT LINE
- EASEMENT
- CURB & GUTTER
- SIDEWALK
- PRO. WATER LINE — W
- PRO. FIRE HYDRANT
- PRO. RAW WATER — NPW
- PRO. SANITARY SEWER — SS
- PRO. STORM SEWER
- EX. OVERHEAD ELECTRIC — OE
- EX. SANITARY SEWER — SS
- EX. PETROLEUM — UP
- EX. GAS — G
- EX. RAW WATER — NPW
- EX. WATER — W
- EX. STORM SEWER — ST

KEY MAP
NTS

50 20 0 50 100
SCALE: 1"=50'

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

PREPARED BY:

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER
TIMOTHY D. McCONNELL
33797
9-4-18

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

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

RAW WATER
PLAN & PROFILE

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.4

SHEET: 19 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	NPW
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST

KEY MAP
NTS

50 20 0 50 100
SCALE: 1"=50'

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

PREPARED BY:

DREXEL, BARRELL & CO.
Engineers • Surveyors
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BOULDER • COLORADO SPRINGS

CLIENT:

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

OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 32797 9-6-18

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

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

WATER
PLAN & PROFILE

PROJECT NO. 20988-00CSCV
DRAWING NO.

C8.5

SHEET: 20 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	NPW
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST

50 20 0 50 100

SCALE: 1"=50'

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

PREPARED BY:

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Engineers • Surveyors
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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

DESIGNED BY:	SBN
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CHECKED BY:	TDM
FILE NAME:	

COLORADO REGISTERED TIM D. McCONNELL 33797 9-6-18 PROFESSIONAL ENGINEER

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

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

WATER
PLAN & PROFILE

PROJECT NO. 20988-00CSCV
DRAWING NO.

C8.6

SHEET: 21 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	NPW
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST

KEY MAP
NTS

50 20 0 50 100
SCALE: 1"=50'

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

PREPARED BY:

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FALCON MARKETPLACE

FALCON, COLORADO

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER
TIMOTHY D. McCONNELL
33797
9-6-18

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

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

WATER
PLAN & PROFILE

PROJECT NO. 20988-00CSCV
DRAWING NO.

C8.7

SHEET: 22 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	NPW
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	SS
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST

KEY MAP
NTS

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

PREPARED BY:

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

DESIGNED BY:	SBN
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CHECKED BY:	TDM
FILE NAME:	

COLORADO REGISTERED PROFESSIONAL ENGINEER TIMOTHY D. McCONNELL 32797 9-6-18

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

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

WATER
PLAN & PROFILE

PROJECT NO. 20988-00CSCV
DRAWING NO.

C8.8

SHEET: 23 OF 27

LEGEND

PROPERTY LINE	
LOT LINE	
EASEMENT	
CURB & GUTTER	
SIDEWALK	
PRO. WATER LINE	W
PRO. FIRE HYDRANT	
PRO. RAW WATER	
PRO. SANITARY SEWER	SS
PRO. STORM SEWER	
PRO. SANITARY SERVICE	S (SIZE)
PRO. WATER SERVICE	W (SIZE)
EX. OVERHEAD ELECTRIC	OE
EX. SANITARY SEWER	
EX. PETROLEUM	UP
EX. GAS	G
EX. RAW WATER	NPW
EX. WATER	W
EX. STORM SEWER	ST

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FALCON MARKETPLACE

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COLORADO REGISTERED PROFESSIONAL ENGINEER 33797

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

DRAWING SCALE:
HORIZONTAL: 1"=60'
VERTICAL: N/A

UTILITY SERVICE PLAN

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.9

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

FIRE HYDRANT INSTALLATION

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-2
Scale: N.T.S.	Revised:		

FIRE HYDRANT SPECIFICATIONS

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-3
Scale: N.T.S.	Revised:		

VALVE INSTALLATION & LOCATION

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-4
Scale: N.T.S.	Revised:		

VALVE BOX INSTALLATION

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-5
Scale: N.T.S.	Revised:		

VOL. (yds)	A	B' 0'<CH<1'-6"	B' 1'<CH≤2'-6"	B' 2'<CH≤3'-0"
¼	2'-4"	2'-10"	¾	¾
½	2'-8"	1'-7"	¾	¾
¾	3'-2"	2'-0"	¾	¾
¾	4'-0"	2'-8"	2'-3"	¾
1	4'-4"	2'-8"	2'-7"	2'-0"
1¼	4'-10"	3'-1"	2'-9"	2'-2"
1½	5'-2"	3'-2"	3'-1"	2'-4"
1¾	5'-10"	3'-5"	3'-1"	2'-8"
2	6'-10"	3'-7"	3'-3"	2'-8"
2¼	6'-2"	3'-7"	3'-3"	2'-8"
2½	6'-4"	3'-11"	3'-7"	3'-0"
2¾	6'-8"	3'-11"	3'-7"	3'-0"
3	6'-10"	4'-1"	3'-9"	3'-1"
3¼	7'-2"	4'-1"	3'-9"	3'-1"
3½	7'-4"	4'-3"	3'-11"	3'-4"
3¾	7'-6"	4'-6"	4'-0"	3'-5"
4	7'-11"		4'-0"	3'-5"
4¼	8'-1"		4'-2"	3'-6"
4½	8'-4"		4'-3"	3'-6"
4¾	8'-6"		4'-3"	3'-7"

VOL. (yds)	A	B' 0'<CH≤1'-6"	B' 1'<CH≤2'-6"	B' 2'<CH≤3'-0"
5	8'-8"		4'-3"	3'-8"
5¼	8'-11"		4'-3"	3'-8"
5½	9'-1"		4'-3"	3'-8"
5¾	9'-3"		4'-4"	3'-10"
6	9'-4"		4'-4"	3'-11"
6¼	9'-6"		4'-4"	3'-11"
6½	9'-8"		4'-4"	4'-0"
6¾	9'-11"		4'-4"	4'-0"
7	10'-2"		4'-4"	4'-0"
7¼	10'-3"		4'-5"	4'-1"
7½	10'-4"		4'-5"	4'-2"
7¾	10'-5"		4'-5"	4'-3"
8	10'-6"		4'-10"	4'-4"
8¼	10'-8"		4'-10"	4'-5"
8½	10'-9"		4'-11"	4'-5"
8¾	10'-11"		4'-11"	4'-5"
9	11'-1"		4'-11"	4'-5"
9¼	11'-2"		5'-0"	4'-6"
9½	11'-4"		5'-0"	4'-6"
9¾	11'-6"		5'-0"	4'-6"
10	11'-8"		5'-0"	4'-6"

ALL WATER MAINS GREATER THAN 12 - INCHES IN DIAMETER SHALL HAVE THRUST BLOCK DESIGNED & SHOWN ON THE CONSTRUCTION DOCUMENTS.

SEE VOLUMES ABOVE FOR A, B & C DIM.

FITTING	4"	6"	8"	12"
TEE	½ yd.	¾ yd.	¾ yd.	2 yd.
90° BEND	½ yd.	¾ yd.	1¼ yd.	3 yd.
45° BEND	½ yd.	½ yd.	¾ yd.	1¾ yd.
22-1/2° BEND	½ yd.	½ yd.	½ yd.	¾ yd.
11-1/4° BEND	½ yd.	½ yd.	½ yd.	½ yd.

THRUST BLOCK DATA

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-10
Scale: N.T.S.	Revised:		

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	2'-0"	3'-0"
6"	2'-0"	3'-0"
8"	2'-0"	3'-0"
10"	2'-4"	3'-0"
12"	2'-8"	3'-0"
18"	2'-10"	3'-0"
24"	3'-0"	4'-0"

TYPICAL TRENCH CROSS-SECTION

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-12
Scale: N.T.S.	Revised:		

REVERSE ANCHOR DETAIL

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-15
Scale: N.T.S.	Revised:		

WATER LINE LOWERING DETAIL

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN 2011	Revised:		W-16
Scale: N.T.S.	Revised:		

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

PREPARED BY:

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

DESIGNED BY:	SBN
DRAWN BY:	SBN
CHECKED BY:	TDM
FILE NAME:	20988-EG-UTDTL

COLORADO REGISTERED PROFESSIONAL ENGINEER 33797 9-4-18

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

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

WATER DETAILS

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.10

SHEET: 25 OF 27

NOTES:

1. IF APPROPRIATE LOCATION FOR DISCHARGED WATER CANNOT BE REACHED BY ROLLING THE BEND, ADDITIONAL BENDS MAY BE REQUIRED BY THE INSPECTOR.
2. COAT TIE RODS, BEAM AND BLACK IRON PIPE WITH EPOXY PHOENARIE COATING, 10 MILS MIN.
3. ENTIRE BLOW OFF ASSEMBLY MUST BE FULLY SUPPORTED, CONCRETE STEPPING STONES MAY BE REQUIRED.
4. PIPE GLOVE APPROVED FOR USE IN POTABLE WATER SYSTEMS MUST BE USED ON ALL THREADED JOINTS.

TEMP & PERMANENT BLOW-OFF ASSEMBLIES FOR 6" & 8" MAINS

Drawn: GGM Date: JAN 2011 Scale: N.T.S.	Revised: Revised: Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-18

NOTE:

DIRECT TAPS TO THE WATER MAIN SHALL BE MADE ONLY WHEN APPROVED BY THE DISTRICT. ALL TAPS SHALL USE TAPPING SADDLES. TAPPING SADDLES SHALL HAVE TWO BRASS BANDS AND A BRASS CORPORATION CONNECTION.

TAPPING DETAIL – 3/4" THRU 2"

Drawn: GGM Date: JAN 2011 Scale: N.T.S.	Revised: Revised: Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-32

NOTES:

1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST ACI-318 SPECIFICATIONS.
2. ALL LADDER RUNGS MUST LINE UP BOTH HORIZONTALLY AND VERTICALLY.
3. ALL SUPPORT MATERIALS SHALL BE GIVEN 2 COATS OF RUST INHIBITIVE PAINT.
4. ALL LADDER RUNGS MUST LINE UP BOTH HORIZONTAL AND VERTICAL.
5. AIR AND VACUUM VALVE STATIONS TO BE HOUSED IN A 6' DIAMETER PRECAST CONCRETE VAULT DESIGNED FOR HS-20 LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD.
6. GROUT ALL ARCHES FULL WIPORTLAND CEMENT, NON-SHRINK GROUT. SEAL AS NECESSARY FOR WATERTIGHT CONNECTION.
7. FOR HDPE MAIN LINE, TRANSITION TO APPROVED PIPE MATERIAL (PVC OR DIP) TO 10 FT OUTSIDE MANHOLE; SEE DETAIL DRAWING A19-6.
8. AIR AND VACUUM VALVE STATIONS SHALL BE DESIGNED PER PIPELINE REQUIREMENTS.

Colorado Springs Utilities It's how we're all connected	AIR AND VACUUM VALVE STATION DETAIL DEPICTS 2" AIR VAC	A6-10 DATED 01/20/17

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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COLORADO REGISTERED PROFESSIONAL ENGINEER 33797

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

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

WATER DETAILS

PROJECT NO. 20988-00CSCV

DRAWING NO.

C8.11

SHEET: 26 OF 27

NOTES:

1. FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANULAR BEDDING MATERIAL AS DEFINED BY CLASS "B" BEDDING.
2. L.F. = LOADFACTOR
3. CLASS "D" BEDDING WILL NOT BE ACCEPTABLE UNDER ANY CONDITION.
4. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 90% OF STD. PROCTOR DENSITY OR AS SPECIFIED FOR THE TRENCH BACKFILL WHICHEVER IS GREATER.

PIPE BEDDING

Drawn: GDM | Revised: | Revised: | Revised:
Date: JAN 2011
Scale: N.T.S.
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-1

BOTTOM OF TRENCH WIDTH		
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-5"	3'-9"
6"	1'-7"	3'-11"
8"	1'-9"	4'-1"
12"	2'-1"	4'-5"
15"	2'-6"	4'-9"
18"	2'-10"	5'-2"
24"	3'-2"	5'-6"

ALL PIPE EMBEDMENT SHALL BE IMPORTED CLASS B BEDDING UNLESS OTHERWISE DIRECTED.

AN OVER EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED UNDER THE DIRECTION OF THE DISTRICT.

UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED THEN TO PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER.

TYPICAL TRENCH CROSS SECTION

Drawn: GDM | Revised: | Revised: | Revised:
Date: JAN 2011
Scale: N.T.S.
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-2

1. MANHOLE BARREL MINIMUM DIAMETER SHALL CONFORM TO TABLE.
2. SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING/SHAPING CONCRETE BASE.
3. PRECAST SECTIONS TO CONFORM TO ASTM C-478.
4. STUB-OUTS SHALL EXTEND A MINIMUM OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED.
5. CONCRETE MANHOLES MAY BE POURED IN PLACE ONLY WITH PRIOR DESIGN AND INSPECTION APPROVAL.
6. ALL MORTOR GROUT SHALL BE MIXED WITH THE TYPE V CEMENT.
7. APPLY COAL TAR EPOXY DAMP-PROOFING TO ALL EXTERIOR CONCRETE SURFACES.
8. CENTER REINF. IN BASE POUR BELOW PIPE O.D. AT FL.
9. ALL EXTERIOR JOINTS SHALL BE SEALED WITH RUBBER JOINT WRAP. REFER TO SPECIFICATIONS.

PIPE I.D.	MANHOLE I.D.	WALL
8" TO 15"	4'-0"	5"
18" TO 30"	5'-0"	6"
36" TO 54"	6'-0"	7"
60" & LARGER	SPECIAL DESIGN	

PRECAST MANHOLE

Drawn: GDM | Revised: | Revised: | Revised:
Date: JAN 2011
Scale: N.T.S.
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-3

M.H. DEPTH	DIMENSION A	DIMENSION B
6' TO 30'	6"	6"
OVER 30'	12"	12"

WATERPROOFING REQUIREMENTS

1. APPLY CEMENT GROUT LAYER (3/8" TO 3/4" THICK) TO ALL INTERIOR JOINTS ABOVE FLOW CHANNEL.
2. APPLY COAL TAR EPOXY DAMPROOFING TO ALL EXTERIOR CONCRETE SURFACES.
3. APPLY CEMENT GROUT LAYER (3/8" TO 3/4" THICK) TO ALL EXTERIOR CONCRETE SURFACES, AS DIRECTED BY DISTRICT, APPLY PRIOR TO DAMPPROOFING.

SANITARY SEWER MANHOLE

Drawn: GDM | Revised: | Revised: | Revised:
Date: JAN 2011
Scale: N.T.S.
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-4

SANITARY SEWER SERVICE CONNECTION

Drawn: GDM | Revised: | Revised: | Revised:
Date: JAN 2011
Scale: N.T.S.
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-7

TYPICAL CROSS SECTION
UTILITIES LOCATION

GENERAL NOTES

1. STORM SEWERS SHALL MAINTAIN A 10' CLEAR SEPARATION FROM WATER.
2. ELECTRIC CONDUITS SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM WATER.
3. FOR 40' WIDE STREET SECTIONS, MAINTAIN WATER 10 FEET FROM SANITARY SEWER AT STREET CENTERLINE.
4. FOR 50' WIDE RIGHT-OF-WAY (ROW), A 5-FOOT WIDE SIDEWALK AND UTILITY EASEMENTS ARE REQUIRED ADJACENT TO THE STREET ROW. FIVE (5) FOOT WIDE ATTACHED SIDEWALK IS USED WITH ELECTRIC UTILITIES BEHIND WALK IN EASEMENT.

TYPICAL UTILITY LOCATIONS

Drawn: GDM | Revised: | Revised: | Revised:
Date: JAN 2011
Scale: N.T.S.
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-8

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

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OVERLOT GRADING, POND SR4 & UTILITY CONSTRUCTION DRAWINGS FOR

FALCON MARKETPLACE

FALCON, COLORADO

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

DESIGNED BY:	SBN
DRAWN BY:	SBN
CHECKED BY:	TDM
FILE NAME:	20988-EG-UTDTL

COLORADO REGISTERED PROFESSIONAL ENGINEER TIMOTHY D. McCONNELL 32787 9-6-18

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

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

SANITARY SEWER DETAILS

PROJECT NO. 20988-00CSCV

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SHEET: 27 OF 27