SOLACE APARTMENTS - FILING NO. 1

A PORTION OF SECTION 7, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M.

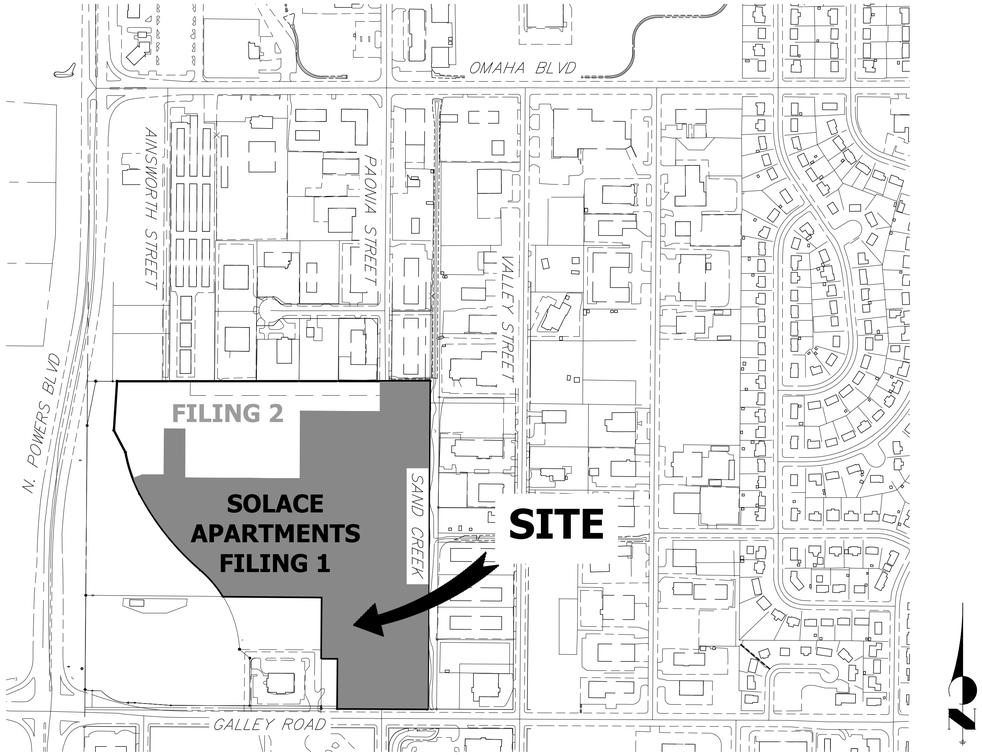
EL PASO COUNTY, COLORADO

CONSTRUCTION DOCUMENTS

EPC STORMWATER REVIEW COMMENTS ARE SHOWN IN ORANGE BOXES WITH BLACK TEXT

ABBREVIATIONS

AC	ACRE
AD	ALGEBRAIC DIFFERENCE
AH	AHEAD
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASSY	ASSEMBLY
AVE	AVENUE
BB	BOX BASE
BK	BACK
BNDY	BOUNDARY
BOP	BOTTOM OF PIPE
BOV	BLOW OFF VALVE
BFV	BUTTERFLY VALVE
BLVD	BOULEVARD
BW	BOTTOM OF WALL
C&G	CURB & GUTTER
CATV	CABLE TELEVISION
CB	CATCH BASIN
CBC	CONCRETE BOX CULVERT
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CDS	CUL-DE-SAC
CFS	CUBIC FEET PER SECOND
CL	CENTER LINE
CLOMR	CONDITIONAL LETTER OF MAP REVISION
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CR	CIRCLE
CSP	CORRUGATED STEEL PIPE
CT	COURT
CTRB	CONCRETE THRUST REDUCER BLOCK
CY	CUBIC YARD
DBPS	DRAINAGE BASIN PLANNING STUDY
DE	DRAINAGE EASEMENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRIVE
DRC	DESIGN REVIEW COMMITTEE
DU	DWELLING UNITS
E	EAST
EA	EACH
EGL	ENERGY GRADE LINE
EL	ELEVATION
ELEC	ELECTRIC
EOA	EDGE OF ASPHALT
ESMT	EASEMENT
EST	ESTIMATE
EX	EXISTING
FDP	FINAL DEVELOPMENT PLAN
FDR	FINAL DRAINAGE REPORT
FES	FLARED END SECTION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FIL	FILING
FO	FIBER OPTIC CABLE
GB	GRADE BREAK
GE	GAS EASEMENT
GIS	GEOGRAPHIC INFORMATION SYSTEM
GL	GAS LINE
GPS	GLOBAL POSITIONING SYSTEM
GV	GATE VALVE
HC	HANDICAP
HDC	HIGH DEFLECTION COUPLING
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HOA	HOME OWNERS ASSOCIATION
HP	HIGH POINT
I	INLET
IE	IRRIGATION EASEMENT
INT	INTERSECTION
INV	INVERT
IRR	IRRIGATION
KB	KICK (THRUST) BLOCK
LE	LANDSCAPE EASEMENT
LF	LINEAR FEET
LN	LANE
LOMR	LETTER OF MAP REVISION
LP	LOW POINT
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MDDP	MASTER DEVELOPMENT DRAINAGE PLAN
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NRCP	NON-REINFORCED CONCRETE PIPE
ODP	OFFICIAL DEVELOPMENT PLAN
OHE	OVERHEAD ELECTRIC
OHU	OVERHEAD UTILITY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	POINT OF CURB RETURN
PDP	PRELIMINARY DEVELOPMENT PLAN
PE	PROFESSIONAL ENGINEER
PI	POINT OF INTERSECTION
PKWY	PARKWAY
PL	PROPERTY LINE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
ROW	RIGHT OF WAY
RT	RIGHT
S	SOUTH
STE	STEEL
SAN	SANITARY SEWER
SF	SQUARE FEET
ST	STREET
STA	STATION
STM	STORM SEWER
SY	SQUARE YARD
SY-IN	SQUARE YARD INCH
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TBW	TOP BACK OF WALK
TEL	TELEPHONE
TOA	TOP OF ASPHALT
TOB	TOP OF BOX
TOC	TOP OF CURB OR CONCRETE
TOF	TOP OF FOUNDATION
TOP	TOP OF PIPE
TW	TOP OF WALL
TYP	TYPICAL
UDFCD	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
UE	UTILITY EASEMENT
U&DE	UTILITY & DRAINAGE EASEMENT
UGE	UNDERGROUND ELECTRIC
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTC	VEHICLE TRACKING CONTROL
W	WEST
WL	WATER LINE
WM	WATER MAIN
WRD	WATER RESOURCES DEPARTMENT
WS	WATER SURFACE
WSE	WATER SURFACE ELEVATION
WTR	WATER
YR	YEAR



VICINITY MAP
SCALE: 1" = 300'

SHEET INDEX

1	COVER SHEET
2	LEGEND & NOTES
3–4	SITE AND OVERALL UTILITY PLAN
5–11	DETAIL GRADING PLAN
12–15	STORM SEWER PLAN AND PROFILE
16–17	POND A PLAN & CROSS SECTIONS
18–19	POND A DETAILS
20–21	POND B PLAN & CROSS SECTIONS
22–23	POND B DETAILS
24–26	ROOF DRAIN AND AREA DRAIN PLANS
27–28	SIGNAGE AND STRIPING PLAN
29–32	DETAIL SHEETS
TOTAL	32

BASIS OF BEARINGS

BENCHMARK

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

PCD File No. added

Please add PCD File No. SF2032 and PPR2047

APPLICANT/OWNER

JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, IL 60607
P~734.216.2577

CIVIL ENGINEER

JR ENGINEERING
5475 TECH CENTER DR
SUITE 235
COLORADO SPRINGS, CO 80919
CONTACT: MIKE BRAMLETT
C~719.659.7679

J·R ENGINEERING

PLANNER

N.E.S. INC.
619 N. CASCADE AVE
SUITE 200
COLORADO SPRINGS, CO 80903
CONTACT: TAMARA BAXTER
P~719.471.0073

ARCHITECT

LCM ARCHITECTS
819 S. WABASH AVE, FIFTH FLOOR
CHICAGO, IL 60605
P~312.995.5305

GEOTECHNICAL ENGINEER

CTL THOMPSON, INC
5170 MARK DABLING BLVD
COLORADO SPRINGS, CO 80918
P~719.528.8300

CTL|THOMPSON INCORPORATED

FIRE PROTECTION DISTRICT

CIMARRON HILLS FIRE DEPARTMENT
1835 TUSKEGEE PL
COLORADO SPRINGS, CO 80915
P~(719) 591-0960

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

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

DANE OLMSTEAD — DATE

JACKSON DEARBORN PARTNERS
404 S. WELLS ST. SUITE 400
CHICAGO, IL 60607

EL PASO COUNTY STATEMENT

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 COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

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 DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR 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 PLAN 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.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1" = 300'
V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

COVER SHEET

SHEET 1 OF 32

JOB NO. 25174.00

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
FENCE		
GUARDRAIL		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
TOP OF SLOPE		
TOE OF SLOPE		
100 YEAR FLOODPLAIN	100YR	100YR
5 YEAR HGL		
100 YEAR HGL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
AIR & VACUUM VALVE ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (ALTERNATE 7)	
NAIL & WASHER – FOUND	NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

DRAINAGE REPORT PLANS

KEY

BASIN DESIGNATION (NO COEFFICIENT)	# / #.##
BASIN DESIGNATION (1 COEFFICIENT)	# / #.## / #
BASIN DESIGNATION (2 COEFFICIENTS)	# / #.## / # / #
ANALISYS POINT IDENTIFIER	#
BASIN DESIGNATION (HISTORIC)	# / #.##
BASIN DESIGNATION (DEVELOPED)	# / #.##
SUB–BASIN DESIGNATION (DEVELOPED)	# / #.##
DRAINAGE PIPE IDENTIFIER	##
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	##
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	?
SWMM DESIGNATION 1	#
SWMM DESIGNATION 2	#
SWMM DESIGNATION 3	#
SWMM DESIGNATION 4	?

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
   3.4. CDOT M&S STANDARDS

4. 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 VERSIONS OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE EINGEERI9NG CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER–THE–FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS–ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PLANNING AND COMMUNITY DEVELOPMENT.

10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT–OF–WAY AND SPECIAL TRANSPORT PERMITS.

15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF–SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

SIGNING AND STRIPING NOTES

1. ALL SIGNS AND PAVEMENT MARKING SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.

3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.

4. ALL SIGNS SHO9WN ON THE SIGNING AND STRIPING PLANN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.

5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.

6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.

7. ALL STREET NAME SIGNS SHALL BE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER–LOWER CASE LETTERING ON 8" BLANK AND NON–LOCAL ROADWAY SIGNS BEING 6" LETTERING. UPPER–LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI–LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER–LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON–RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".

8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.

9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE, FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S–614–8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.

10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" THICKNESS.

11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S–627–1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE, STOP BARS SHALL BE 24" IN WIDTH, CROSSWALK LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S–627–1. S-627-1

Revised accordingly.

12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON–LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S–627–1.

13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520–6819 PRIOR TO AND UPON COMPLETION OF THE SIGNING AND STRIPING.

14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
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J·R ENGINEERING
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Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

LEGEND & NOTES

SHEET 2 OF 32

JOB NO. 25174.00

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T-BONE CONSTRUCTION INC
1250 AINSWORTH ST
CODE 200 AT PRESENT WORTH

AINSWORTH ST

EXISTING 8" WATER LINE

EXISTING FIRE - HYDRANT

A STORAGE PLACE - COLORADO SPRINGS LLC
5835 OMAHA BLVD
STORAGE

KING KEITH
5925 PAONIA CT
STORAGE

GPM INVESTMENTS LLLP
5935 PAONIA CT
STORAGE

EXISTING PROPERTY LINE

JLG INC
5945 PAONIA CT
STORAGE

GPM INVESTMENTS LLLP
5955 PAONIA CT
MANUFACTURING PROCESSING

CREATIVE REAL ESTATE LLC
1255 PAONIA ST
STORAGE

EX. 60.00' PUBLIC ESMT

EXISTING 8" WATER LINE

CONNECT TO EXISTING WATER LINE

20' PUBLIC UTILITY ESMT

PROPOSED 8" WATER LINE (TYP)

STORM SEWER (TYP, SIZE VARIES)

FILING 2

TRANQUIL GLEN GROVE

UTILITY GARAGE

CAR WASH STATION

SOLACE POND VIEW

PARK / PLAYGROUND AREA

30' PUBLIC UTILITY ESMT

BUILDING K

Please ensure that light poles are outside the clear zone (refer to ECM table 2-16)

Lights relocated out-side of clear zone per table 2-16

Please rename these two buildings per comment on Site Dev. Plan.

BUILDING J

GARAGE (TYP)

Per conversations with Sophie, the names will remain the same.

FULL SPECTRUM DETENTION POND A

PROPOSED 8" WATER LINE (TYP)

FIRE HYDRANT (TYP)

PROPOSED TRASH ENCLOSURE (TYP)

WATER & FIRE SERVICE (TYP)

5' SANITARY MH (TYP)

PROPERTY LINE

PROSPERITY POINT

PROPOSED 3' CROSS PAN (TYP)

24' FL-FL

BUILDING C

BUILDING D

BUILDING F

BUILDING H

PROPOSED TRASH ENCLOSURE (TYP)

DOG PARK AREA

COMMUNITY HEIGHTS

PAONIA STREET

80' ROW

40' FL-FL

BUILDING G

PROPOSED 8" SANITARY SEWER (TYP)

GARAGE (TYP)

BUILDING E

PROPOSED TRASH ENCLOSURE (TYP)

BUILDING B

SOLACE POND VIEW

STORM SEWER (TYP, SIZE VARIES)

STATE OF COLORADO
N POWERS BLVD
STATE

PROPOSED 3' CROSS PAN (TYP)

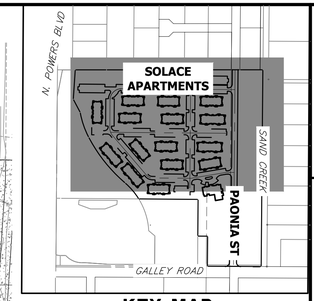
BUILDING A

CLUBHOUSE & POOL AREA

SAND CREEK CENTER TRIBUTARY

100YR

SEE SHEET 4



KEY MAP
SCALE 1"=500'

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE PLANS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS - FILING NO. 1

SITE AND OVERALL UTILITY PLAN

SHEET 3 OF 32

JOB NO. 25174.00

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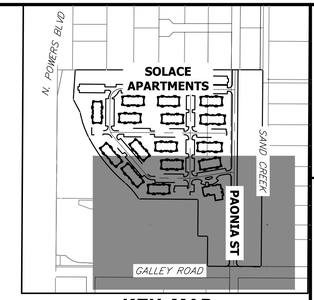
SEE SHEET 3

BUILDING C
BUILDING B
BUILDING A
BUILDING E
BUILDING G
DOG PARK AREA
COMMUNITY HEIGHTS
GARAGE (TYP)
PROPERTY LINE
PROPOSED TRASH ENCLOSURE (TYP)
SOLACE POND VIEW
PROPOSED 8" SANITARY SEWER (TYP)
STORM SEWER (TYP, SIZE VARIES)
PROPOSED 3' CROSS PAN (TYP)
24' FL-FL
30' PUBLIC UTILITY ESMT
CLUBHOUSE & POOL AREA
DOG RUN AREA
STATE OF COLORADO
N POWERS BLVD
STATE
BUTLER & PEETZ LLC
5840 GALLEY RD
VACANT COMMERCIAL LOTS
PAONIA STREET
80' ROW
40' FL-FL
TYPE R STORM INLET (TYP)
PROPOSED 8" WATER (TYP)
FULL SPECTRUM DETENTION POND B
CONNECT TO EXISTING WATERLINE
EXISTING 8" SANITARY SEWER
EXISTING 12" WATERLINE
EXISTING 8" WATERLINE
FIRE HYDRANT (TYP)
90' ROW
50' FL-FL
PEETZ WILLIAM H
5910 GALLEY RD
SPECIAL PURPOSE
SAND CREEK CENTER TRIBUTARY
GRELL INVESTMENTS LLC
1160 VALLEY ST
STORAGE
WEBSTER 1130 LLC
1130 VALLEY ST
STORAGE
SCR CAPITAL PARTNERS LLC
1110 VALLEY ST
STORAGE
DOBRY PRITEL INC
1080 VALLEY ST
STORAGE
7250 FRASER LLC
1050 VALLEY ST
VACANT INDUSTRIAL LOTS
GATE
100YR
PROPOSED 8" SANITARY SEWER
GALLEY RD
90' ROW
EXISTING 4" XTRU GAS MAIN
EXISTING 26" WATER MAIN
EXISTING ELECTRIC MAIN
CONNECT TO EXISTING SANITARY
MAVERICK BROTHER CSP LLC
945 CONRAD ST
STORAGE
CONRAD ST
J B R ENTERPRISES INC
5925 GALLEY RD
SPECIAL PURPOSE
TLB REAL ESTATE LLC
6015 GALLEY RD
STORAGE



KEY MAP
SCALE 1"=500'

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

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ENGINEER'S STATEMENT

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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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SOLACE APARTMENTS – FILING NO. 1

SITE AND OVERALL UTILITY PLAN

SHEET 4 OF 32

JOB NO. 25174.00

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SEE SHEET 6

SEE SHEET 8

SOLACE POND VIEW

CLUBHOUSE & POOL AREA
×TOF: 6259.26

PANOTA STREET

80' ROW

5 STEPS

4 STEPS

3' CROSSPAN SEE DETAIL ON THIS SHEET

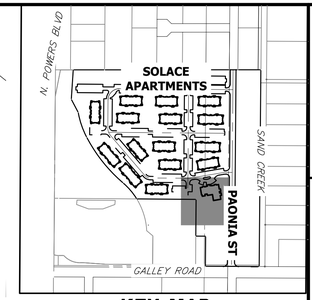
PROPERTY LINE

30' PUBLIC UTILITY ESMT

DOG RUN AREA

100YR

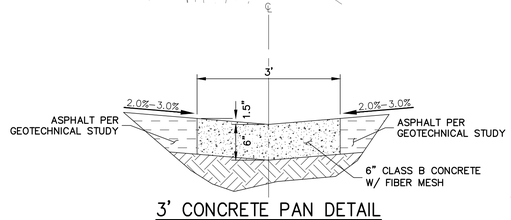
KEY MAP
SCALE 1"=500'



LEGEND

	6" VERTICAL CATCH CURB W/ 1' GUTTER
	6" VERTICAL SPILL CURB W/ 1' GUTTER
	PROPOSED SIDEWALK
	PROPOSED WATERLINE
	PROPOSED STORM SEWER
	PROPOSED SANITARY SEWER
	EXISTING CURB & GUTTER
W	EXISTING WATERLINE
	EXISTING STORM SEWER
S	EXISTING SANITARY SEWER
	EXISTING PROPERTY LINE
	EXISTING BOUNDARY LINE
56XX.XXFL	PROPOSED FLOWLINE ELEVATION
56XX.XXLP	PROPOSED LOW POINT
56XX.XXHP	PROPOSED HIGH POINT
56XX.XXGB	PROPOSED GRADE BREAK
56XX.XX	PROPOSED FINISHED GRADE

3' CONCRETE PAN DETAIL
SCALE: N.T.S.



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ORIGINAL SCALE: 1" = 15'

ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

MICHAEL A. BRAMLETT 32314 REGISTERED PROFESSIONAL ENGINEER

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SOLACE APARTMENTS – FILING NO. 1
DETAIL GRADING PLAN

SHEET 5 OF 32

JOB NO. 25174.00

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SEE SHEET 7

SEE SHEET 9

SEE SHEET 8

SEE SHEET 5

PROSPERITY POINT

COMMUNITY HEIGHTS

PANOIA STREET

SOLACE POND VIEW

BUILDING H

×TOF: 6265.53

BUILDING G

×TOF: 6258.16

ADA RAMP

2 STEPS

1 STEP

10 STEPS

8 STEPS

4 STEPS

3' CROSSPAN
SEE DETAIL ON SHEET 5

30' PUBLIC UTILITY ESMT

80' ROW

100' R

KEY MAP

SCALE 1"=500'

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COLORADO P.E. 32314
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DATE

COLORADO REGISTERED MICHAEL A. BRAMLETT 32314 PROFESSIONAL ENGINEER

SOLACE APARTMENTS – FILING NO. 1

DETAIL GRADING PLAN

SHEET 6 OF 32

JOB NO. 25174.00

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FILING 2

TRANQUIL GLEN GROVE

END FILING 1 ASPHALT

COMMUNITY HEIGHTS

FILING 2

PAONIA STREET

80' ROW

3' CROSSPAN
SEE DETAIL ON SHEET 5

30' PUBLIC UTILITY ESMT

1 STEP

ADA RAMP

3 STEPS

5 STEPS

ADA RAMP

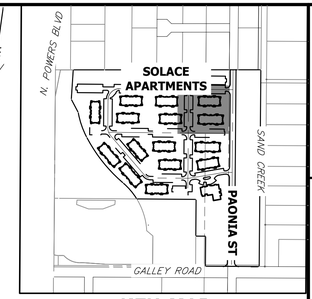
BUILDING K
×TOF: 6269.28

BUILDING J
×TOF: 6265.72

SEE SHEET 9

SEE SHEET 6

KEY MAP
SCALE 1"=500'



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ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
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SOLACE APARTMENTS – FILING NO. 1
DETAIL GRADING PLAN

SHEET 7 OF 32

JOB NO. 25174.00

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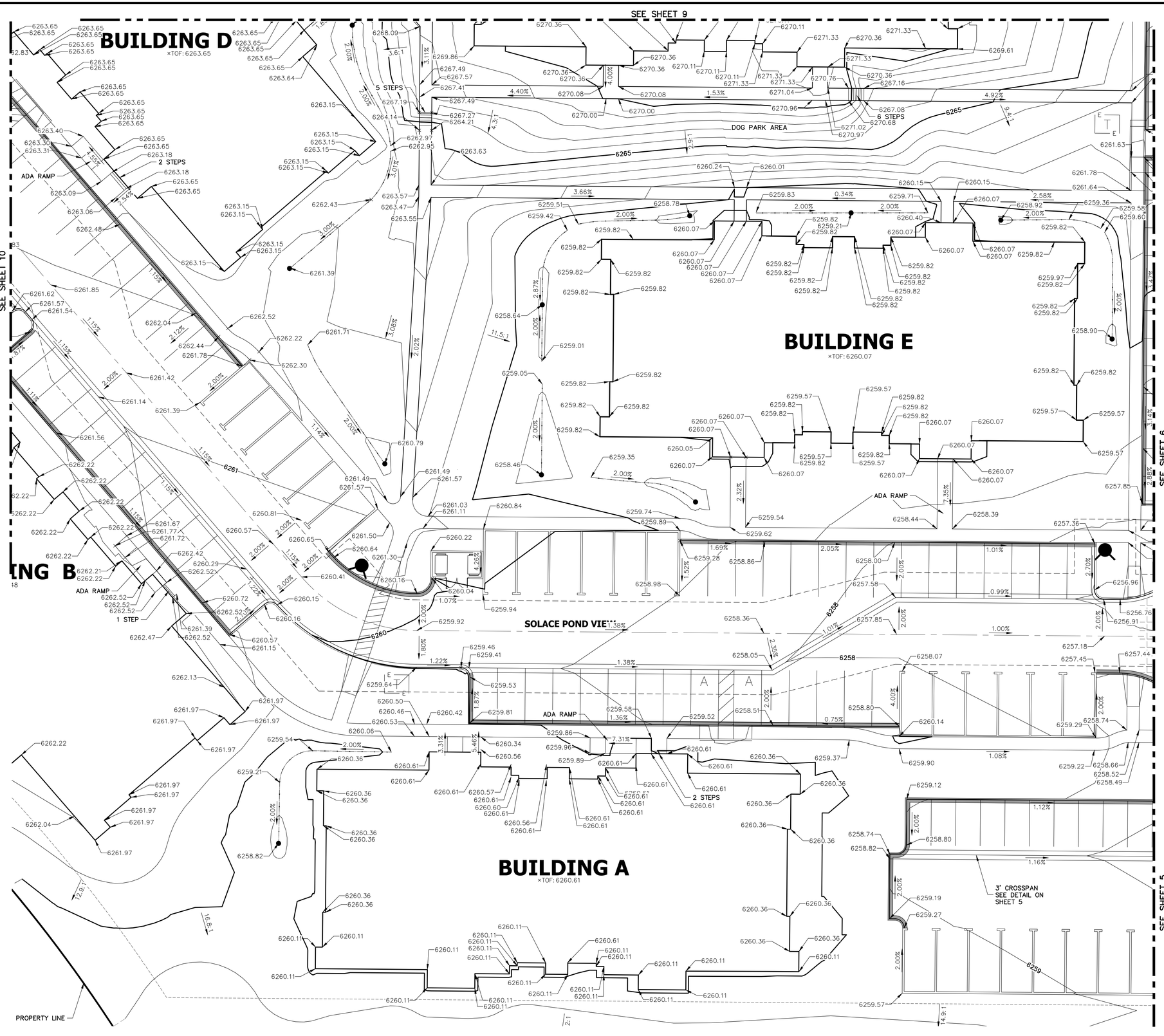

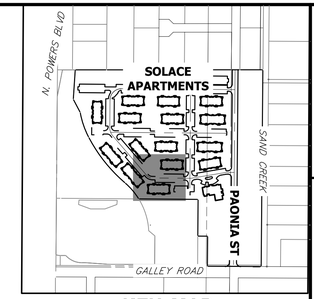

KEY MAP
SCALE 1"=500'

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DATE	11/20/20	CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1
DETAIL GRADING PLAN

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15 8 0 15 30
ORIGINAL SCALE: 1" = 15'

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

SHEET 8 OF 32

JOB NO. 25174.00

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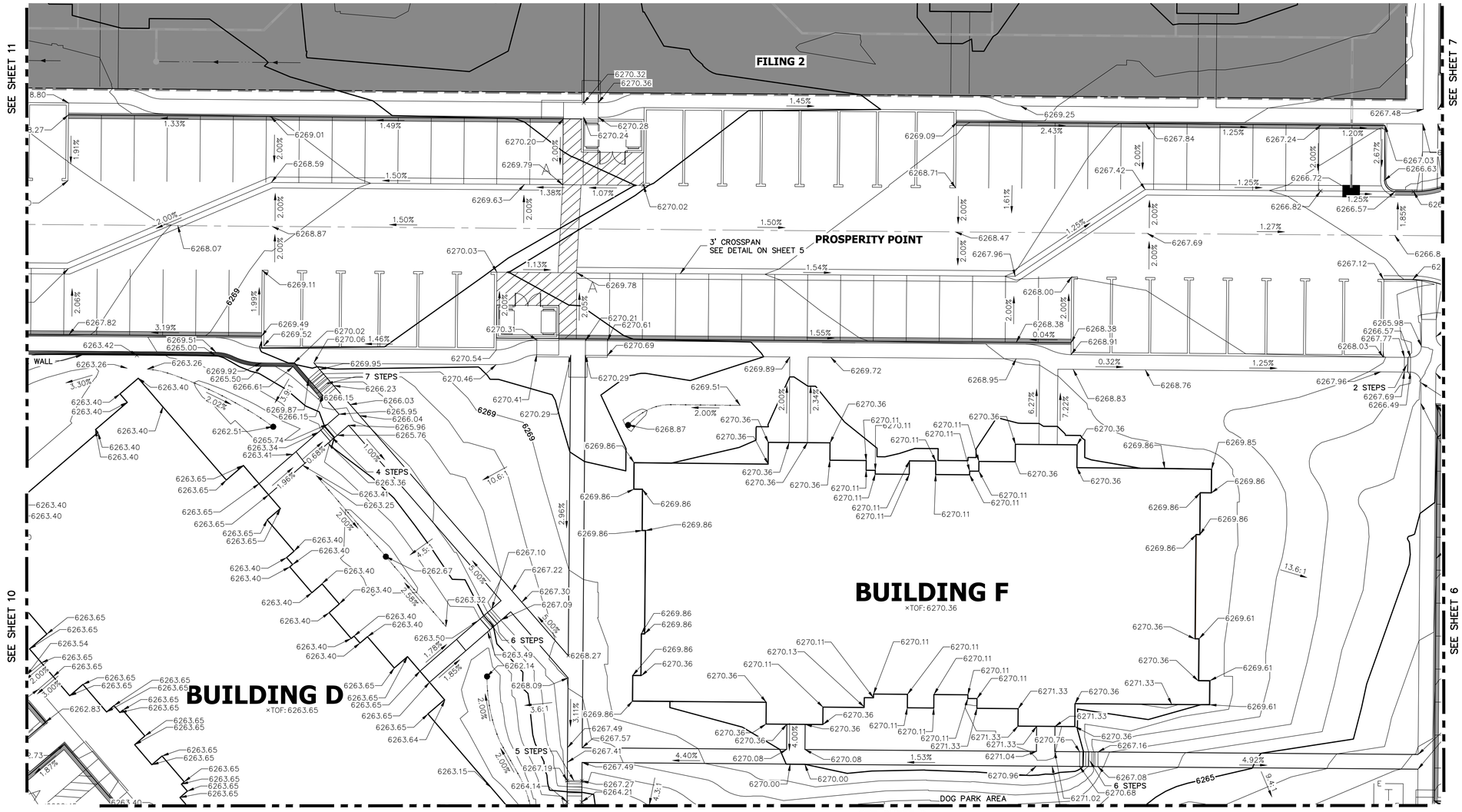

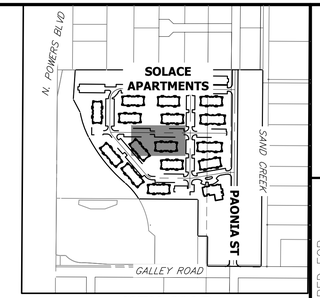

KEY MAP
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SOLACE APARTMENTS – FILING NO. 1
DETAIL GRADING PLAN

ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC
DATE

SHEET 9 OF 32
JOB NO. 25174.00

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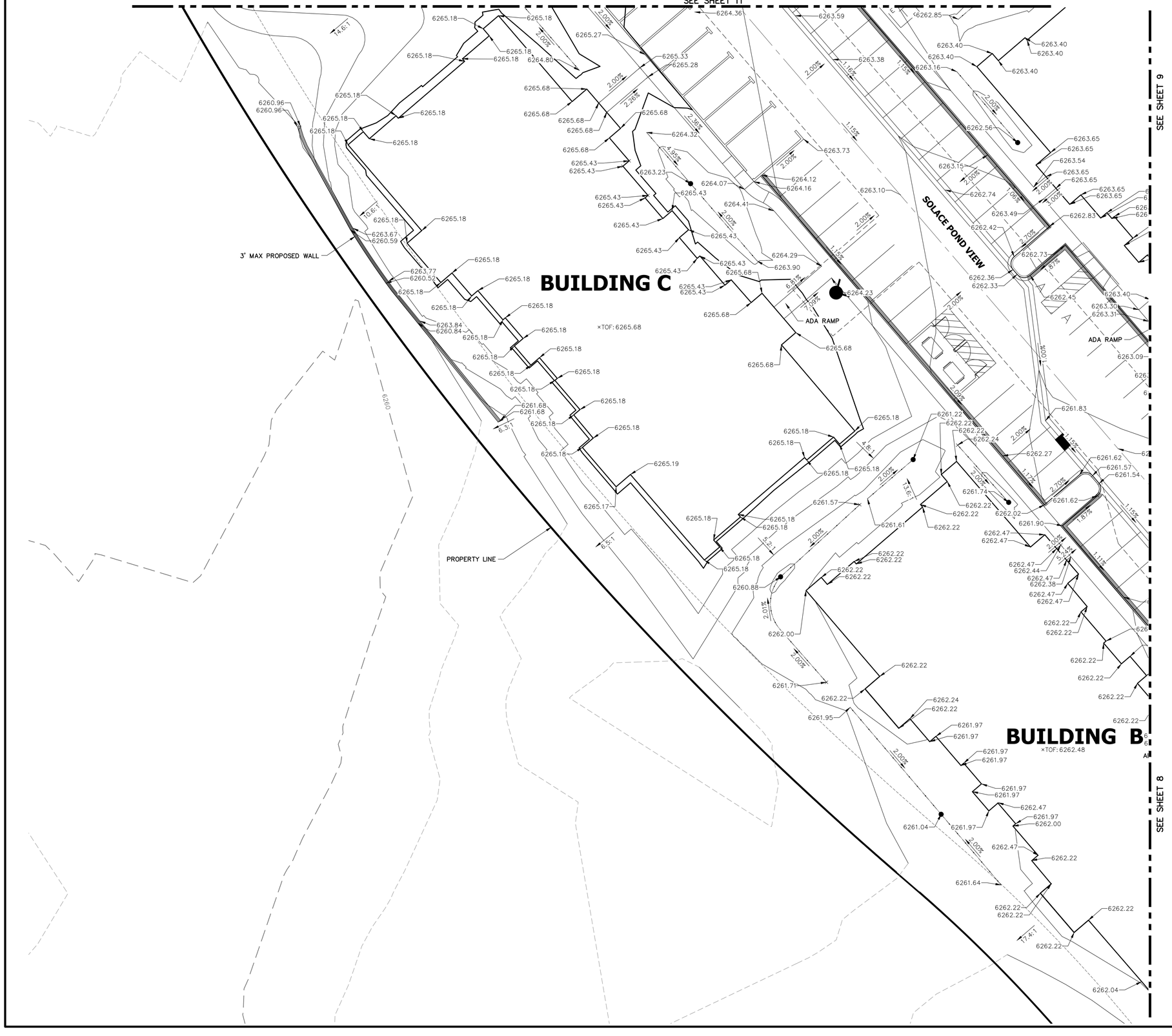

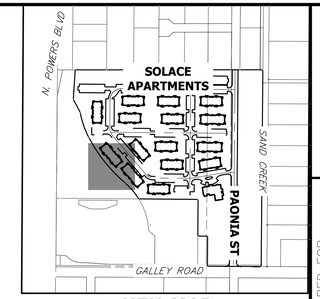

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ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

MIKE A. BRAMLETT
32314
REGISTERED
PROFESSIONAL ENGINEER

SOLACE APARTMENTS – FILING NO. 1
DETAIL GRADING PLAN

SHEET 10 OF 32
JOB NO. 25174.00

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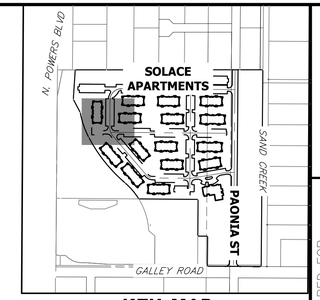

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DETAIL GRADING PLAN

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ORIGINAL SCALE: 1" = 15'

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PREPARED UNDER MY SUPERVISION

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COLORADO P.E. 32314
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DATE

MIKE A. BRAMLETT
32314
REGISTERED PROFESSIONAL ENGINEER

SHEET 11 OF 32
JOB NO. 25174.00

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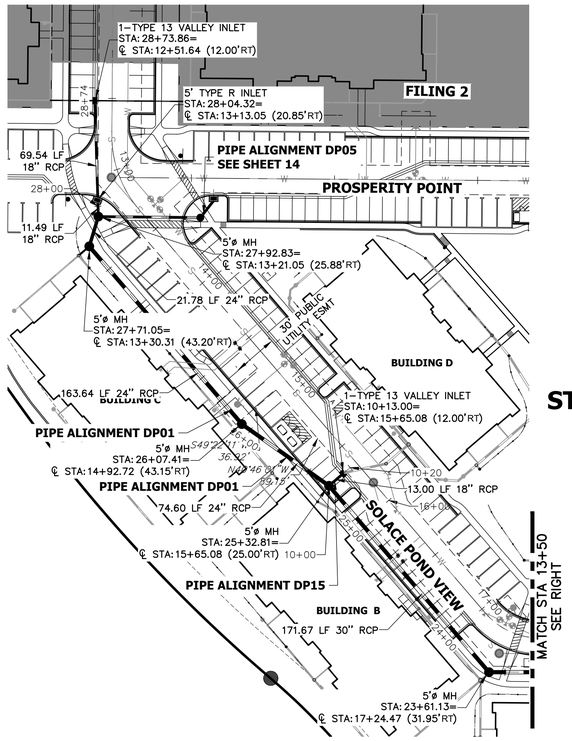

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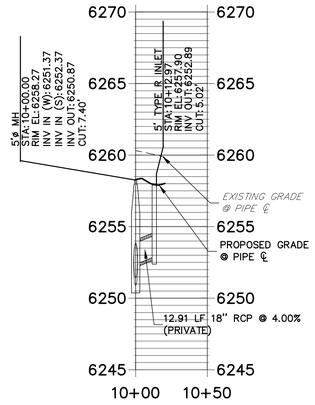

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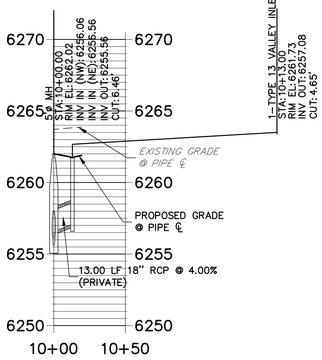

DP12 PROFILE
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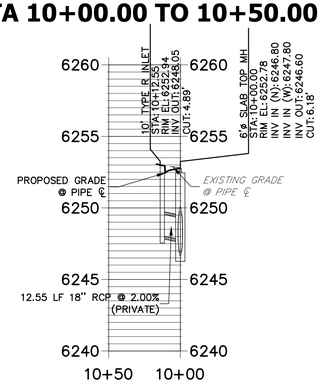
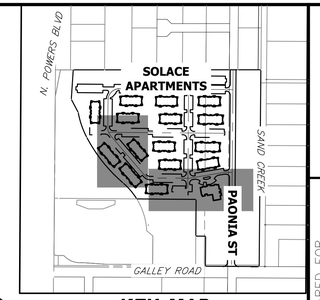


STORM SEWER NOTES

1. SEE DETAIL SHEET 29 FOR APPLICABLE STORM SEWER DETAILS.
2. PIPE LENGTHS MEASURED FROM CENTER OF MANHOLES TO CENTER OF MANHOLES, INSIDE FACE OF INLETS, OUTLET END OF FLARED END SECTIONS AND FACE OF WALLS WHERE APPLICABLE.
3. ℄ STATIONS & OFFSETS ARE LABELED AT CENTER OF STRUCTURE.
4. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS, PRIOR TO EXTENSION OF MAINS AND SERVICE CONNECTIONS. CONTRACTOR TO COORDINATE CONNECTIONS WITH UTILITY PROVIDER.
5. ALL PUBLIC WATER LINES ARE OWNED BY CHEROKEE METROPOLITAN DISTRICT.

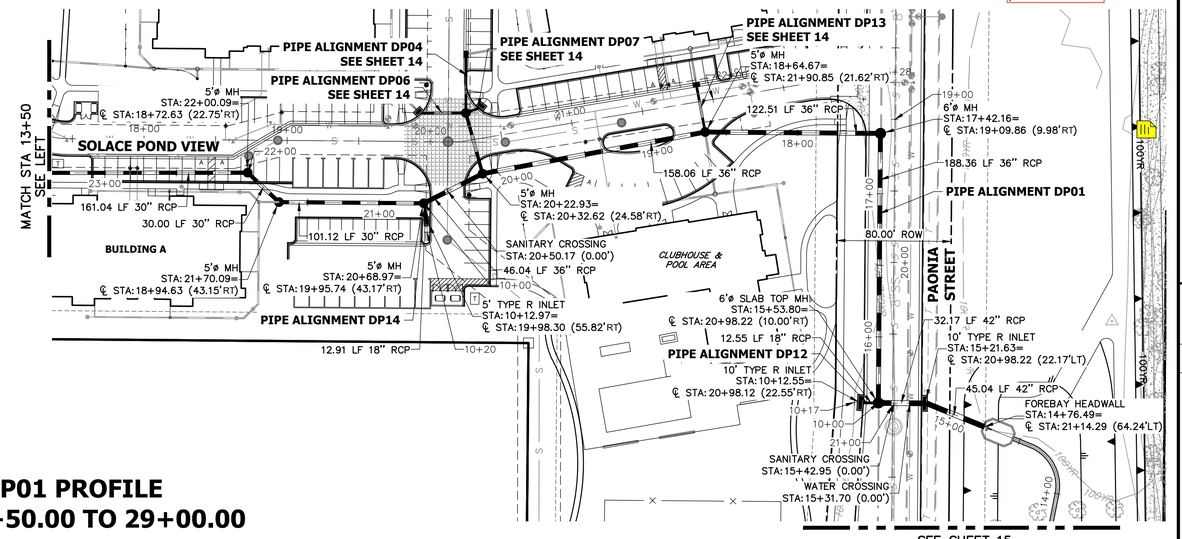


KEY MAP
SCALE 1"=500'

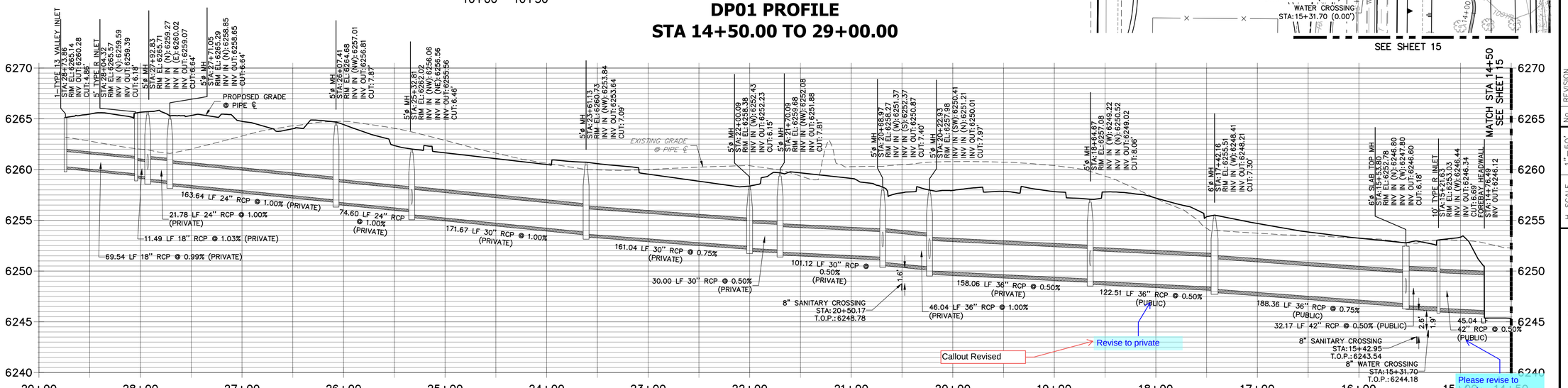
50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

Also update storm sewer profiles to show hydraulic grade lines.

HGLs added to profiles



DP01 PROFILE
STA 14+50.00 TO 29+00.00



Callout Revised

Revise to private

Callout Revised

Please revise to private 14+50

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

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

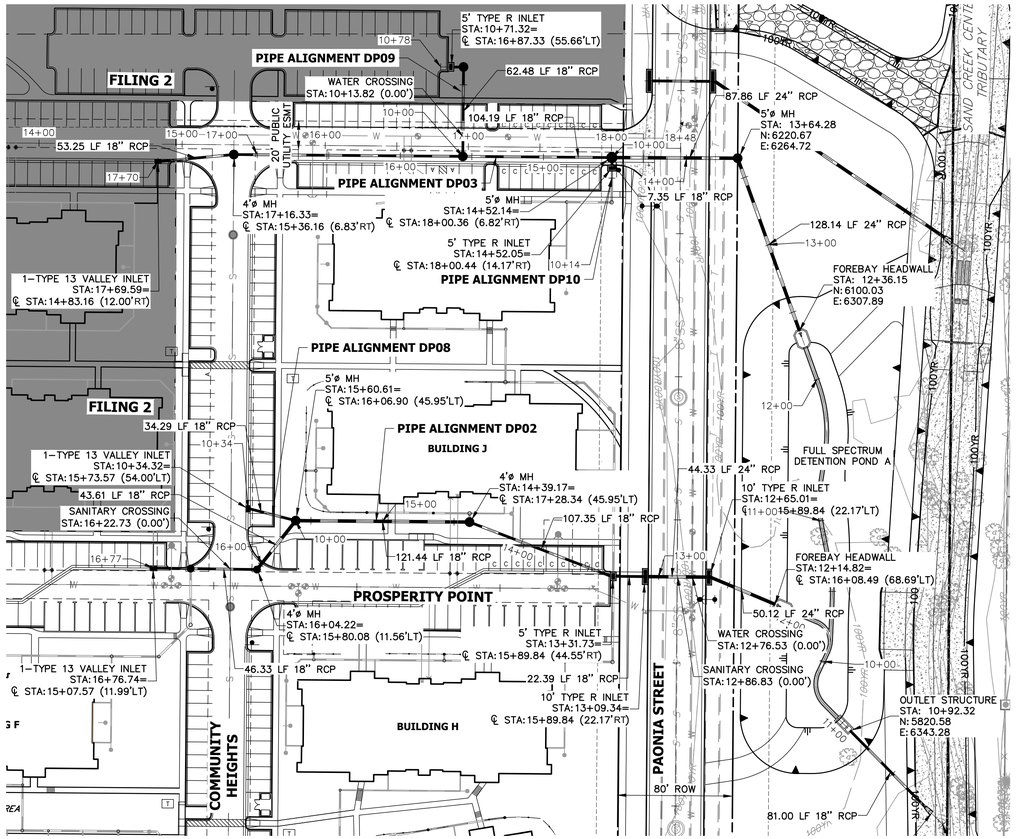
SOLACE APARTMENTS – FILING NO. 1

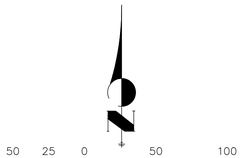
STORM SEWER PLAN AND PROFILE

SHEET 12 OF 32

JOB NO. 25174.00

X:\25\10000.all\25174X0\Drawings\sheet dwgs\Construction Drawings\25174X00P01.dwg, DP01-12-14-15, 11/25/2020 12:00:12 PM, GE





STORM SEWER NOTES

1. SEE DETAIL SHEET 29 FOR APPLICABLE STORM SEWER DETAILS.
2. PIPE LENGTHS MEASURED FROM CENTER OF MANHOLES TO CENTER OF MANHOLES, INSIDE FACE OF INLETS, OUTLET END OF FLARED END SECTIONS AND FACE OF WALLS WHERE APPLICABLE.
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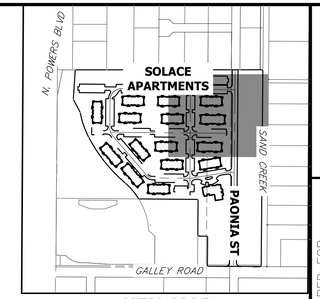
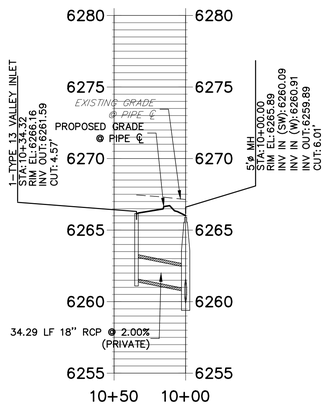
Also update storm sewer profiles to show hydraulic grade lines.

HGLs added to profiles

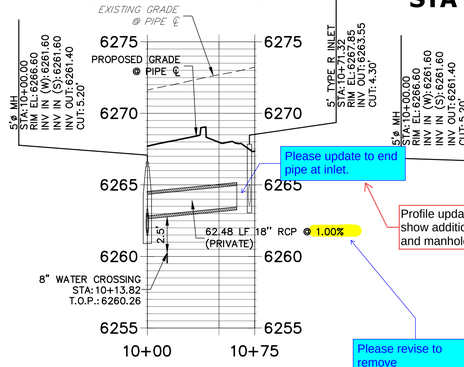


KEY MAP
SCALE 1"=500'

DP08 PROFILE
STA 10+00.00 TO 10+50.00



DP09 PROFILE
STA 10+00.00 TO 10+75.00



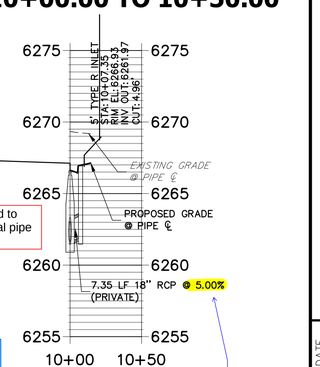
Please update to end pipe at inlet.

Profile updated to show additional pipe and manhole

Please revise to remove inconsistencies. Drainage report identifies pipe grade as 2.1%.

Drainage Report revised to reflect what is shown in these plans

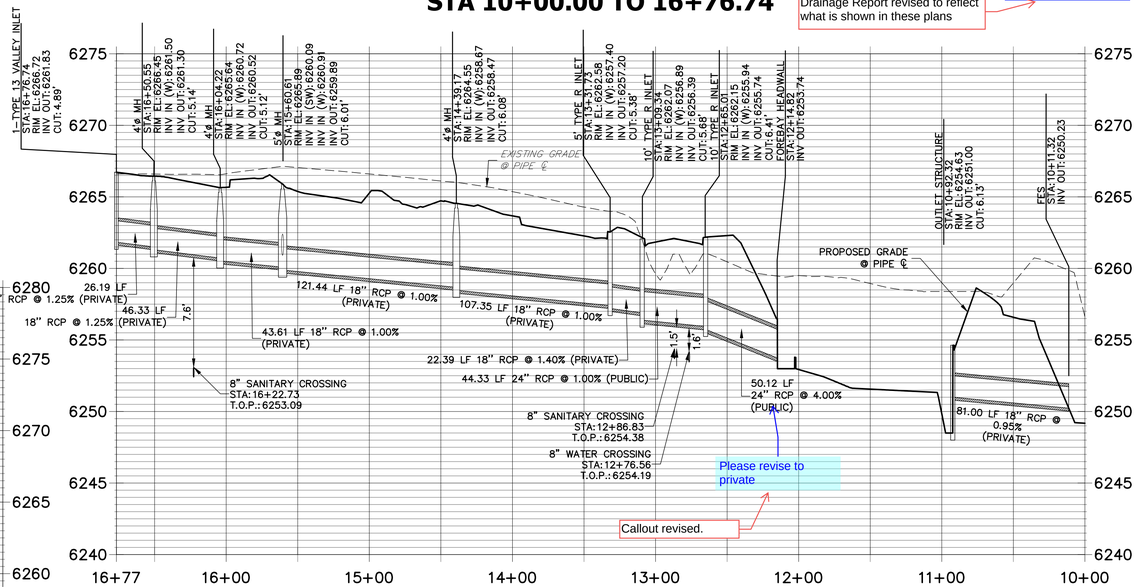
DP10 PROFILE
STA 10+00.00 TO 10+50.00



Please revise to remove inconsistencies. Drainage report identifies pipe grade as 10.4%.

DP02 PROFILE
STA 10+00.00 TO 16+76.74

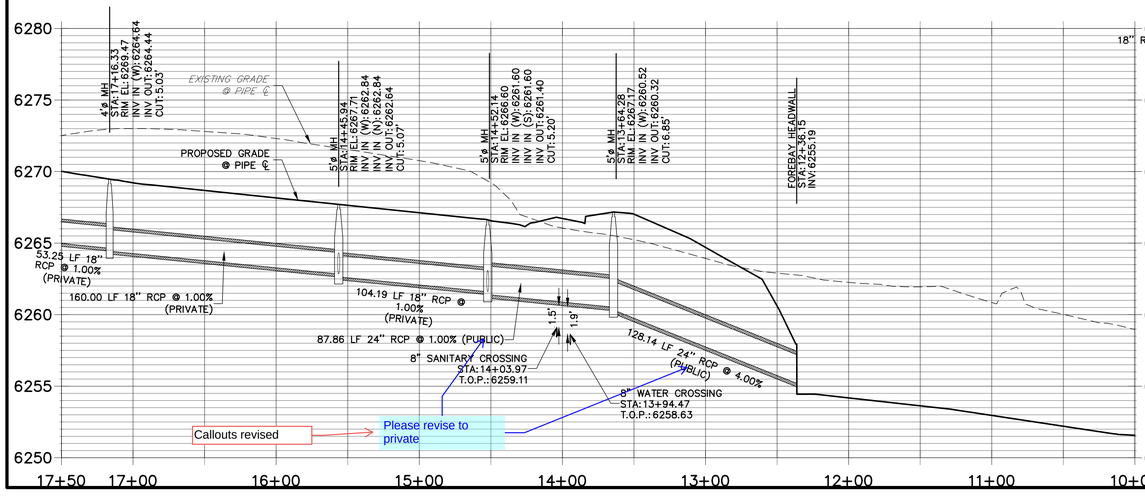
Drainage Report revised to reflect what is shown in these plans



Please revise to private

Callout revised.

DP03 PROFILE
STA 10+00.00 TO 17+50.00



Callouts revised

Please revise to private

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ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
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H-SCALE 1"=50'
V-SCALE 1"=5'
DATE 11/20/20
DESIGNED BY JRM
DRAWN BY JRM
CHECKED BY

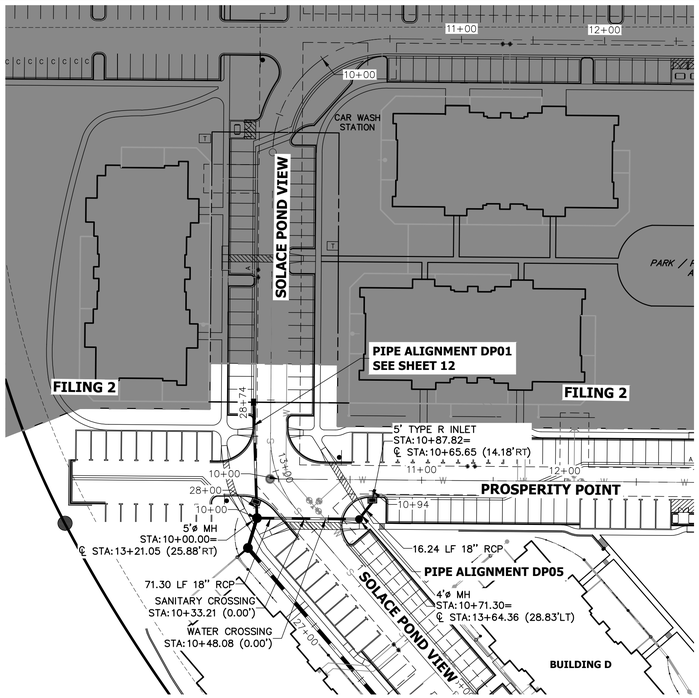
SOLACE APARTMENTS – FILING NO. 1

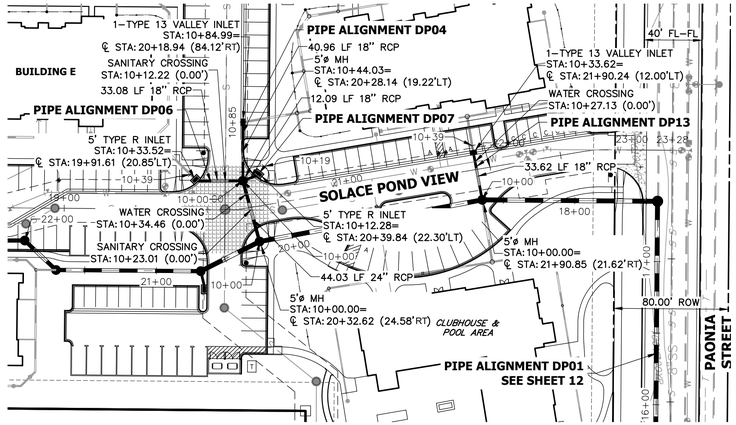
STORM SEWER PLAN AND PROFILE

SHEET 13 OF 32

JOB NO. 25174.00

x:\25174000.all\25174.00\Drawings\sheet dwgs\Construction Drawings\25174.00SP01.dwg, DP02-03,08-09-10, 11/25/2020 12:00:39 PM, GE

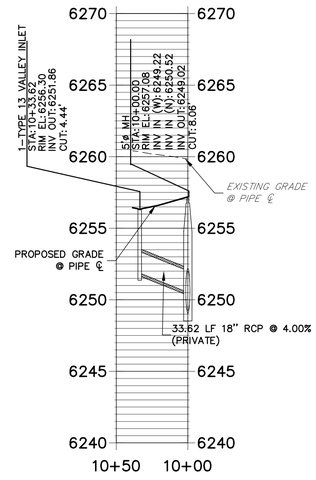


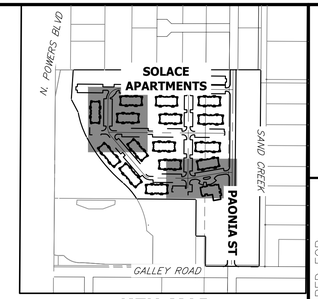


Also update storm sewer profiles to show hydraulic grade lines.

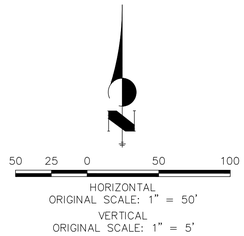
HGLs added to profiles

DP13 PROFILE
STA 10+00.00 TO 10+50.00

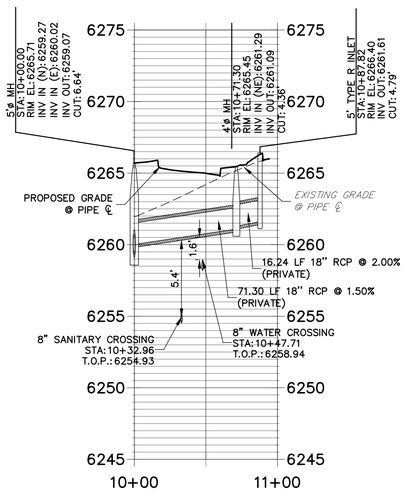




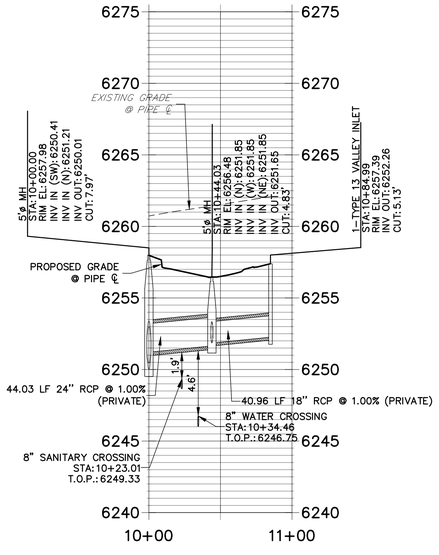
KEY MAP
SCALE 1"=500'



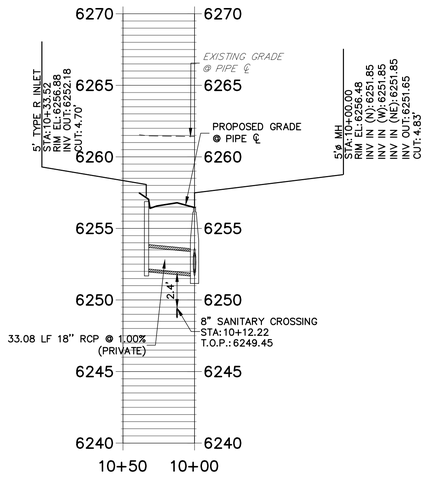
DP05 PROFILE
STA 10+00.00 TO 11+00.00



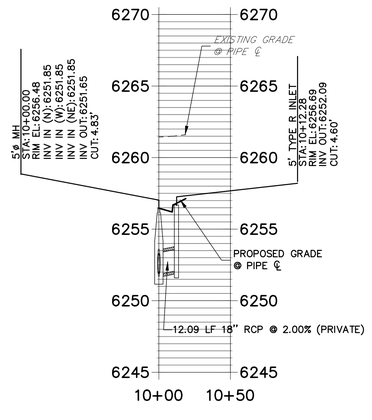
DP04 PROFILE
STA 10+00.00 TO 11+00.00



DP06 PROFILE
STA 10+00.00 TO 10+50.00



DP07 PROFILE
STA 10+00.00 TO 10+50.00



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ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

STORM SEWER PLAN AND PROFILE

SHEET 14 OF 32

JOB NO. 25174.00

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STORM SEWER NOTES

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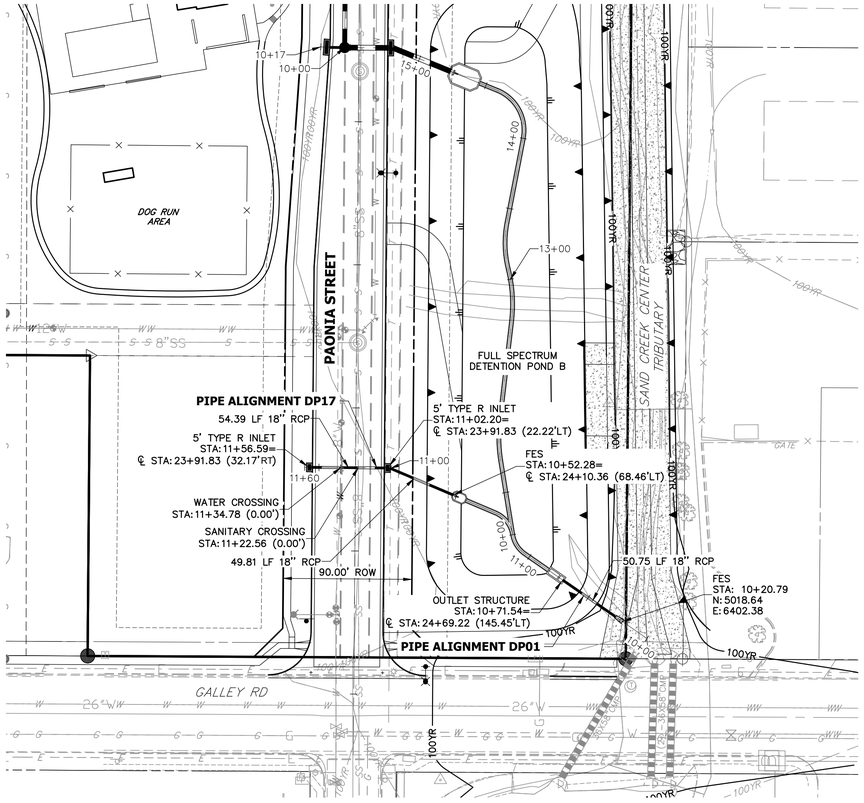
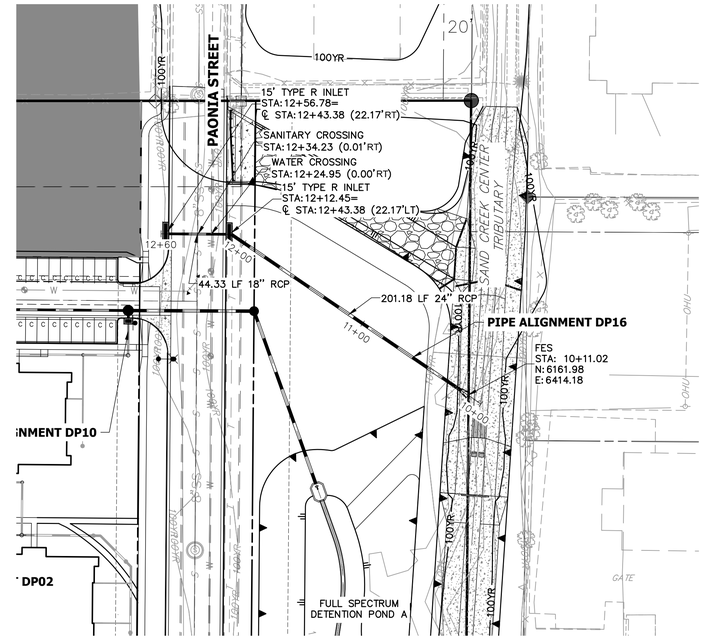
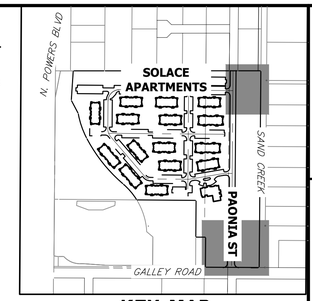




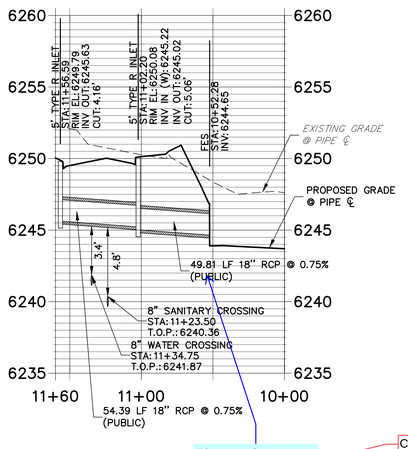


KEY MAP
SCALE 1"=500'

Also update storm sewer profiles to show hydraulic grade lines.

HGLs added to profiles

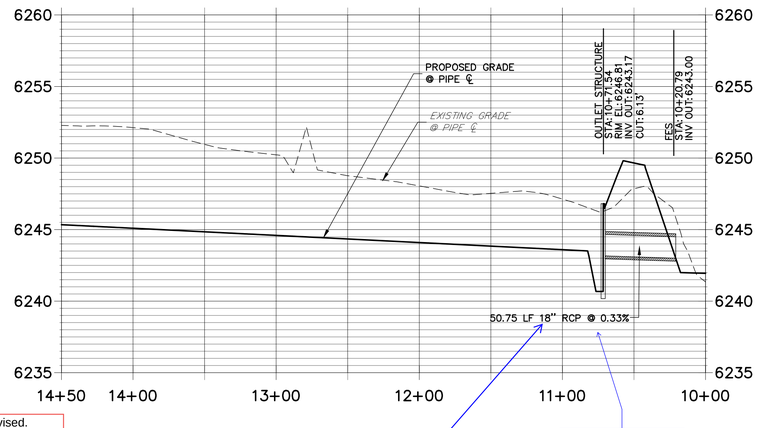
DP17 PROFILE
STA 10+00.00 TO 11+60.00



Please revise to private

Callout revised.

DP01 PROFILE (1)
STA 10+00.00 TO 14+50.00



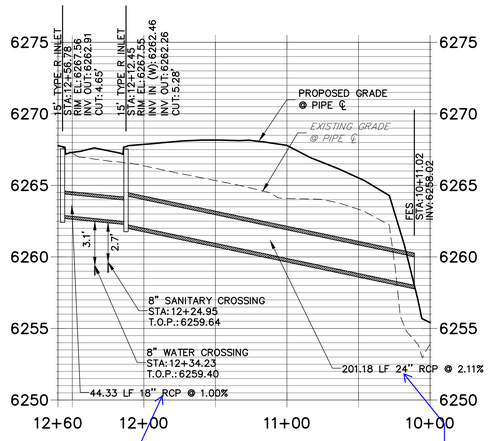
Callout revised

Please label as private

Please revise to add pipe run to drainage report summary sheet.

Pipe added to StormCAD summary sheet

DP16 PROFILE
STA 10+00.00 TO 12+60.00

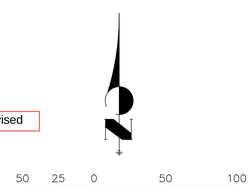


Callout Revised

Please label as public

Callout Revised

Please label as private



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COLORADO P.E. 32314
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32314 — MIKE A. BRAMLETT — REGISTERED PROFESSIONAL ENGINEER

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V-SCALE	1"=5'
DATE	11/20/20
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DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

STORM SEWER PLAN AND PROFILE

SHEET 15 OF 32

JOB NO. 25174.00

X:\25100\00.all\25174\00\Drawings\sheet dwgs\Construction Drawings\25174\00\P01.dwg, DP01-11, 11/25/2020 12:01:26 PM, GE

Please fix overlapping text

Tables revised.

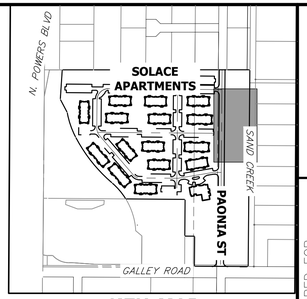
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
A1	ACCESS ROAD/TBC	N: 6309.44 E: 6246.27	6267.94
A2	ACCESS ROAD/TBC	N: 6294.44 E: 6246.15	6267.77
A3	ACCESS ROAD	N: 6282.22 E: 6298.56	6269.34
A4	ACCESS ROAD	N: 6295.07 E: 6306.29	6269.04
A5	ACCESS ROAD	N: 6239.16 E: 6370.19	6270.00
A6	ACCESS ROAD	N: 6252.02 E: 6377.92	6269.70
A7	ACCESS ROAD	N: 6206.86 E: 6387.08	6267.48
A8	ACCESS ROAD	N: 6205.87 E: 6402.05	6267.18
A9	ACCESS ROAD/TOP	N: 6141.31 E: 6382.75	6261.90
A10	ACCESS ROAD	N: 6140.32 E: 6397.72	6261.60
A11	TOP	N: 6123.75 E: 6321.23	6262.86
A12	TOP	N: 6140.95 E: 6356.46	6263.03
A13	ACCESS ROAD/TOE	N: 6083.63 E: 6329.58	6255.58
A14	ACCESS ROAD/TOE	N: 6068.02 E: 6335.27	6255.19
A15	ACCESS ROAD/TOP	N: 6101.17 E: 6380.10	6260.97
A16	ACCESS ROAD	N: 6100.19 E: 6395.07	6260.67
A17	ACCESS ROAD	N: 6012.06 E: 6374.21	6259.48
A18	ACCESS ROAD	N: 6011.07 E: 6389.18	6259.22
A19	ACCESS ROAD/ SPILLWAY TOP/ CUTOFF WALL	N: 5931.83 E: 6368.92	6258.08
A20	ACCESS ROAD/ SPILLWAY TOP	N: 5931.44 E: 6383.92	6258.08

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
A21	ACCESS ROAD/ SPILLWAY CREST	N: 5917.45 E: 6367.96	6256.64
A22	ACCESS ROAD/ SPILLWAY CREST	N: 5917.06 E: 6382.97	6256.70
A23	ACCESS ROAD/ SPILLWAY CREST	N: 5877.46 E: 6366.94	6256.64
A24	ACCESS ROAD/ SPILLWAY CREST	N: 5877.08 E: 6381.95	6256.64
A25	ACCESS ROAD/ SPILLWAY TOP/ CUTOFF WALL	N: 5863.05 E: 6367.14	6258.08
A26	ACCESS ROAD/ SPILLWAY TOP	N: 5862.67 E: 6382.14	6258.08
A27	ACCESS ROAD	N: 5791.32 E: 6368.12	6256.70
A28	ACCESS ROAD	N: 5791.53 E: 6383.12	6256.53
A29	CONC CUTOFF WALL	N: 5924.69 E: 6366.62	6257.08
A30	CONC CUTOFF WALL	N: 5917.53 E: 6364.82	6256.18
A31	CONC CUTOFF WALL	N: 5877.54 E: 6363.79	6256.09
A32	CONC CUTOFF WALL	N: 5870.30 E: 6365.51	6257.08
A33	SPILLWAY	N: 5862.52 E: 6388.03	6254.82
A34	SPILLWAY	N: 5876.92 E: 6387.95	6254.89
A35	SPILLWAY	N: 5916.91 E: 6388.98	6255.28
A36	SPILLWAY	N: 5931.30 E: 6389.57	6255.58
A37	ACCESS ROAD/TOP	N: 6154.20 E: 6383.60	6263.00
A38	ACCESS ROAD/TOP	N: 6086.43 E: 6379.13	6260.82
A39	ACCESS ROAD/TOP	N: 6060.71 E: 6377.43	6260.43
A40	ACCESS ROAD/TOP	N: 6026.71 E: 6375.18	6259.79

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
A41	ACCESS ROAD/TOP	N: 5967.71 E: 6371.28	6258.45
A42	TOP	N: 5840.20 E: 6366.65	6257.57
A43	TOP	N: 5804.97 E: 6351.72	6257.57
A44	TOP	N: 5790.61 E: 6316.24	6257.59
A45	TOP	N: 5790.69 E: 6306.24	6257.58
A46	TOP	N: 5802.64 E: 6278.05	6257.31
A47	TOP	N: 5831.01 E: 6266.57	6260.28
A48	TOP	N: 5894.35 E: 6267.08	6261.30
A49	TOP	N: 5957.68 E: 6267.59	6262.58
A50	TOP	N: 6021.01 E: 6268.10	6263.68
A51	TOP	N: 6084.35 E: 6268.62	6264.63
A52	TOP	N: 6112.54 E: 6280.56	6263.24
A53	TOP	N: 6123.99 E: 6310.25	6263.54
A54	TOP	N: 6123.57 E: 6316.42	6263.19
A55	TOE	N: 6053.91 E: 6339.33	6255.18
A56	TOE	N: 6012.43 E: 6340.76	6254.58
A57	TOE	N: 5989.23 E: 6340.05	6254.37
A58	TOE	N: 5965.33 E: 6342.10	6253.99
A59	TOE	N: 5948.88 E: 6342.83	6253.57
A60	TOE	N: 5923.02 E: 6343.05	6253.08

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
A61	TOE	N: 5872.32 E: 6341.93	6252.21
A62	TOE	N: 5842.39 E: 6341.66	6251.87
A63	TOE	N: 5822.57 E: 6321.50	6252.02
A64	TOE	N: 5822.69 E: 6306.50	6252.18
A65	TOE	N: 5825.08 E: 6300.86	6252.23
A66	ACCESS ROAD/TOE	N: 5830.39 E: 6298.57	6252.26
A67	TOE	N: 5894.09 E: 6299.08	6253.62
A68	TOE	N: 5957.42 E: 6299.59	6253.84
A69	TOE	N: 6020.76 E: 6300.10	6254.71
A70	TOE	N: 6084.09 E: 6300.61	6255.63
A71	TOE	N: 6089.73 E: 6303.00	6255.61
A72	TOE	N: 6091.96 E: 6316.26	6255.16
A73	TOE	N: 6089.19 E: 6324.83	6255.54
A74	OUTLET STRUCTURE	N: 5829.64 E: 6334.38	6251.33
A75	TRICKLE CHANNEL	N: 5839.12 E: 6325.05	6251.40
A76	TRICKLE CHANNEL	N: 5861.60 E: 6321.19	6251.52
A77	TRICKLE CHANNEL INTERSECTION	N: 5876.29 E: 6328.05	6251.61
A78	TRICKLE CHANNEL	N: 5883.34 E: 6329.62	6251.67
A79	TRICKLE CHANNEL	N: 5912.62 E: 6330.80	6252.04
A80	TRICKLE CHANNEL	N: 5936.39 E: 6328.91	6252.35

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
A81	TRICKLE CHANNEL	N: 5961.29 E: 6323.89	6252.67
A82	TRICKLE CHANNEL	N: 5996.30 E: 6323.09	6253.12
A83	TRICKLE CHANNEL	N: 6014.01 E: 6325.83	6253.35
A84	TRICKLE CHANNEL	N: 6062.96 E: 6321.15	6253.98
A85	FOREBAY	N: 6088.73 E: 6311.93	6254.32
A86	TRICKLE CHANNEL	N: 5896.39 E: 6320.31	6252.44
A87	FOREBAY	N: 5903.89 E: 6302.70	6252.87
A88	ACCESS ROAD/TBC	N: 5797.94 E: 6241.80	6259.56
A89	ACCESS ROAD/TBC	N: 5782.76 E: 6241.68	6259.26
A90	ACCESS ROAD	N: 5800.62 E: 6259.92	6259.90
A91	ACCESS ROAD	N: 5785.78 E: 6262.12	6259.52
A92	ACCESS ROAD/TOP	N: 5805.60 E: 6275.42	6257.62
A93	ACCESS ROAD/TOP	N: 5795.40 E: 6287.73	6256.54
A94	ACCESS ROAD/TOE	N: 5822.65 E: 6311.52	6252.12
A97	WQCV WSEL 12" CLASS 6 ABC BELOW 8" CLASS 6 ABC ABOVE	N: 5823.36 E: 6294.85	6253.49
A98	WQCV WSEL 12" CLASS 6 ABC BELOW 8" CLASS 6 ABC ABOVE	N: 5812.97 E: 6305.95	6253.49

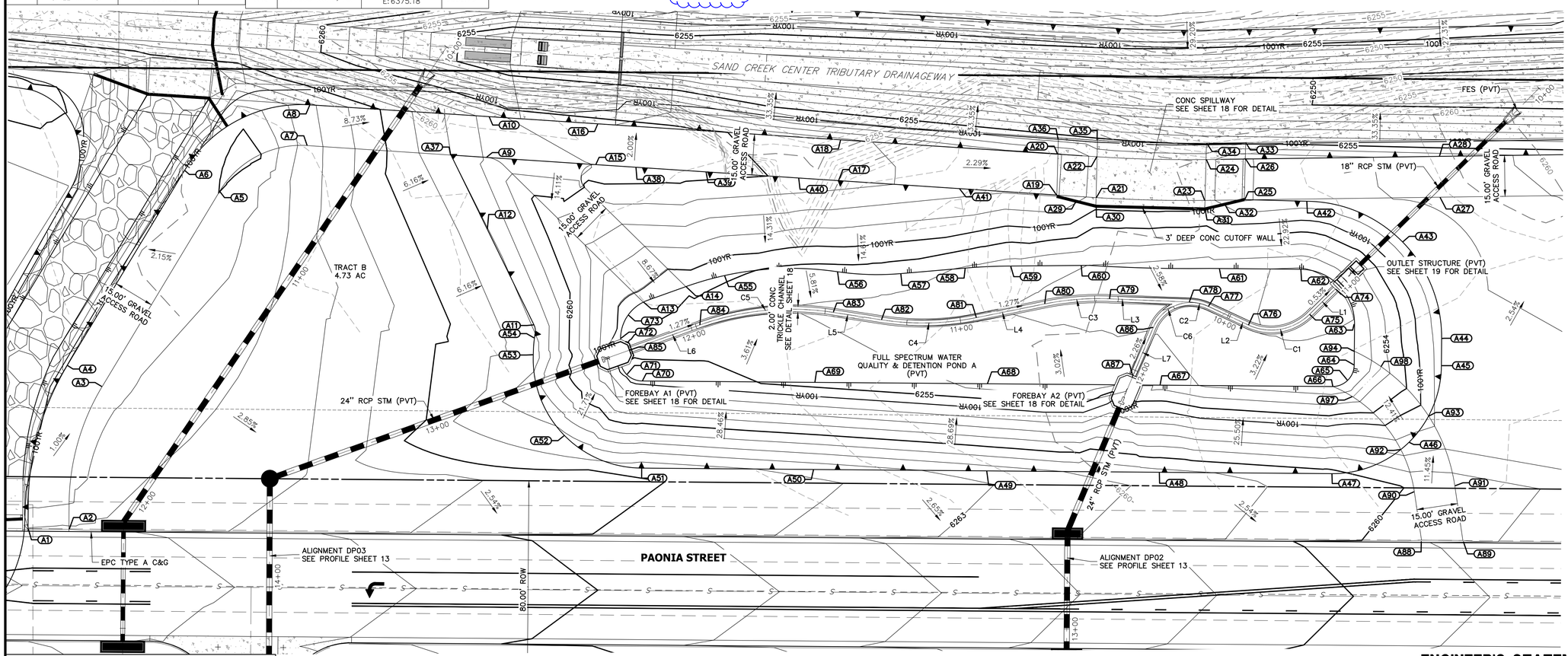


KEY MAP
SCALE 1"=500'

NOTES
1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 12–15 FOR PROPOSED STORM SEWER DESIGN.
3. SEE PAONIA STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED PAONIA STREET DESIGN.
4. SEE WATER DISTRIBUTION PLANS AND SANITARY SEWER PLAN AND PROFILE BY JR ENGINEERING FOR PROPOSED DESIGN OF CMD–OWNED WATER AND SANITARY UTILITIES.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N44°30'51"W	13.30'
L2	N25°01'27"E	15.54'
L3	N02°17'50"E	29.31'
L4	N11°23'45"W	25.39'
L5	N08°46'40"E	17.92'
L6	N19°41'19"W	27.37'
L7	S67°02'13"E	19.12'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	69°32'18"	20.00'	24.27'
C2	22°43'37"	20.00'	7.93'
C3	13°41'35"	100.00'	23.90'
C4	20°10'25"	100.00'	35.21'
C5	28°27'59"	100.00'	49.68'
C6	92°03'40"	15.00'	24.10'



20 10 0 20
ORIGINAL SCALE: 1" = 20'

Know what's below.
Call before you dig.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

MIKE A. BRAMLETT
32314
REGISTERED
PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
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CHICAGO, ILL 60607
OFFICE PHONE
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J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1" = 20'
V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	JBP
DRAWN BY	RPD
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

POND A PLAN & CROSS SECTIONS

SHEET 16 OF 32

JOB NO. 25174.00

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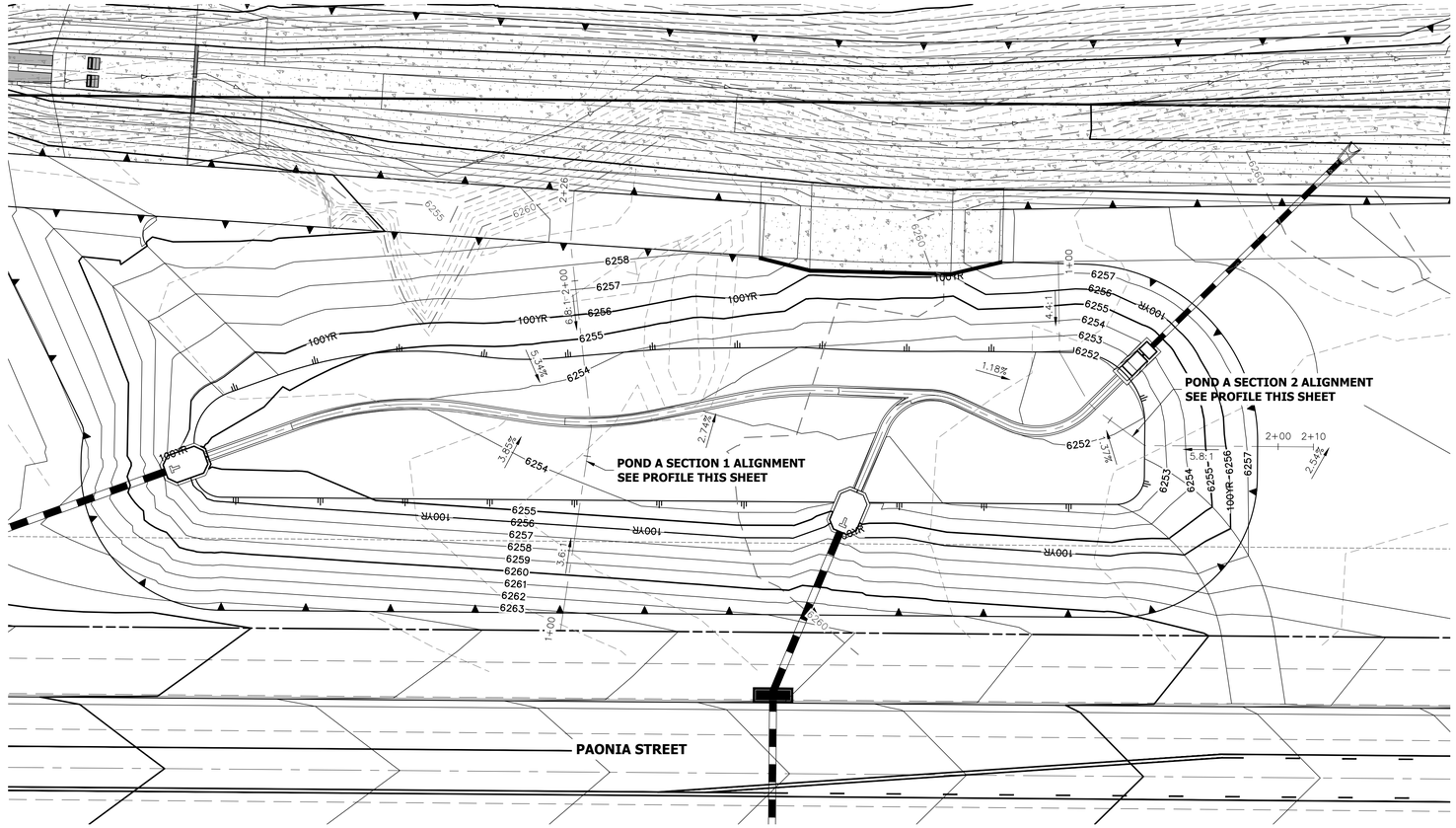
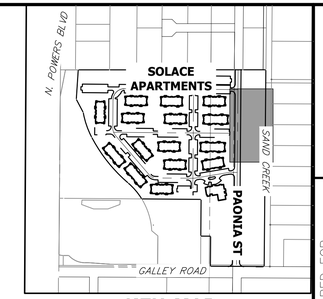


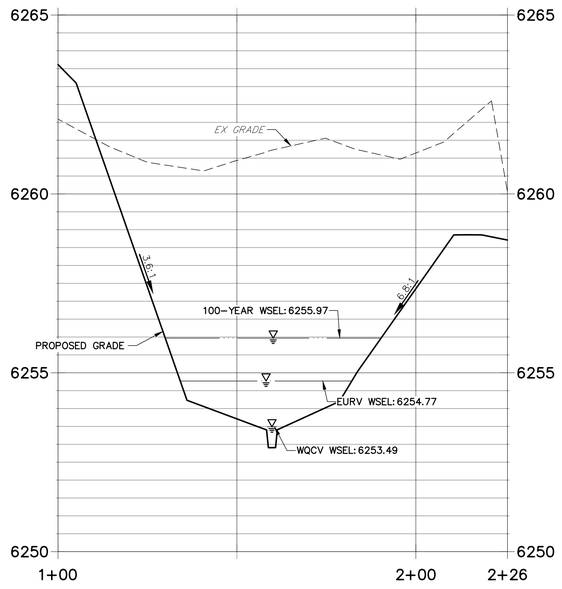


KEY MAP
SCALE 1"=500'

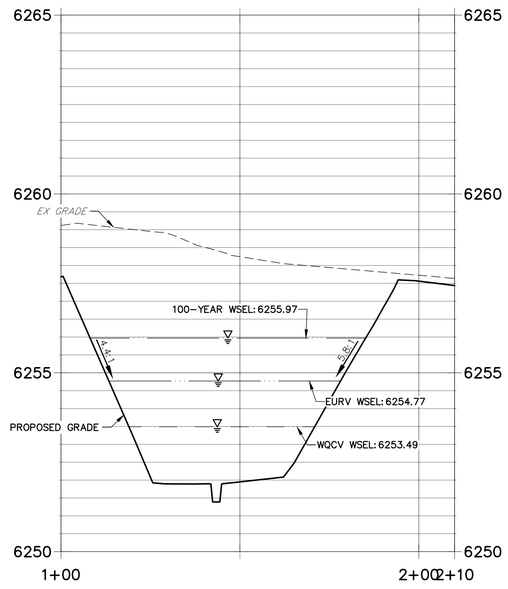
NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 12–15 FOR PROPOSED STORM SEWER DESIGN.
3. SEE PAONIA STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED PAONIA STREET DESIGN.
4. SEE WATER DISTRIBUTION PLANS AND SANITARY SEWER PLAN AND PROFILE BY JR ENGINERING FOR PROPOSED DESIGN OF CMD–OWNED WATER AND SANITARY UTILITIES.

POND A SECTION 1 PROFILE
STA 1+00.00 TO 2+25.60



POND A SECTION 2 PROFILE
STA 1+00.00 TO 2+10.00



20 10 0 20
HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

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

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ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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PREPARED FOR
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No.	REVISION	BY	DATE

H–SCALE	1"=20'
V–SCALE	1"=2'
DATE	11/20/20
DESIGNED BY	JBP
DRAWN BY	RPD
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1
POND A PLAN & CROSS SECTIONS

SHEET 17 OF 32
JOB NO. 25174.00

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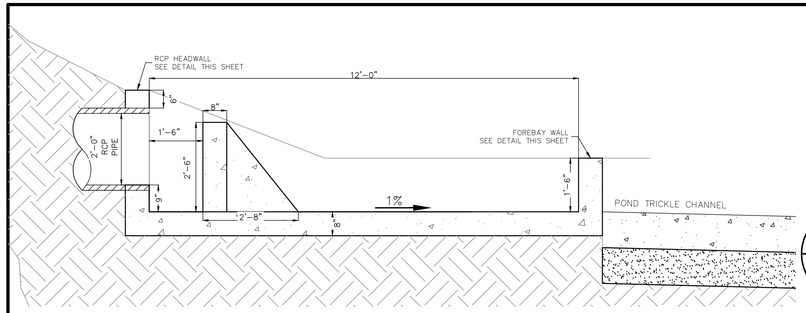
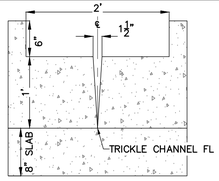


FOREBAY A1 & A2 PROFILE VIEW

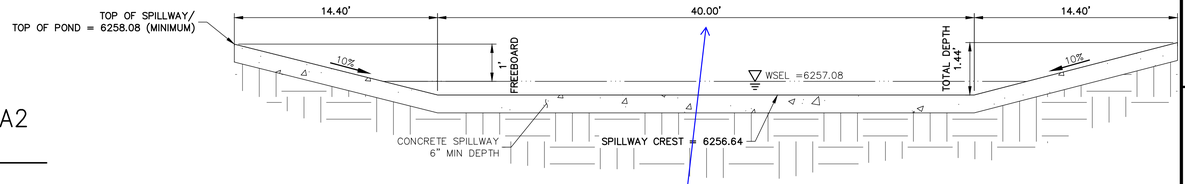
SCALE: 1" = 2'

A



FOREBAY A1 & A2 WALL SECTION

SCALE: 1" = 1'

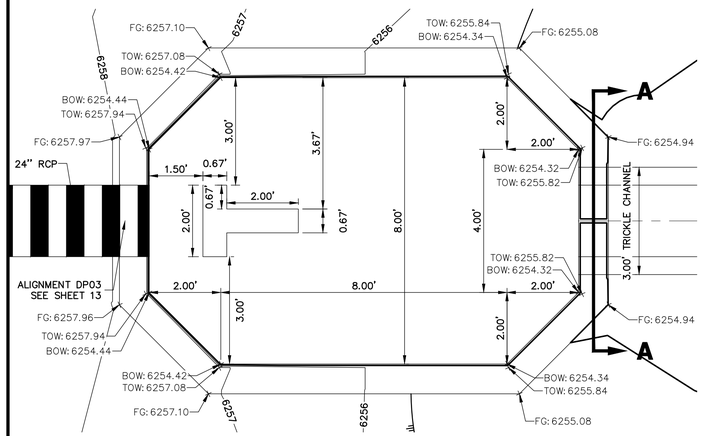


POND A EMERGENCY OVERFLOW SPILLWAY

SCALE: N.T.S.

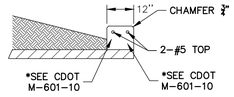
The length does not match what is shown on the design calculation. Revise accordingly

Calculations Revised



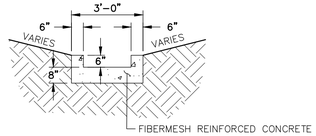
FOREBAY A1 PLAN VIEW

SCALE: 1" = 2'



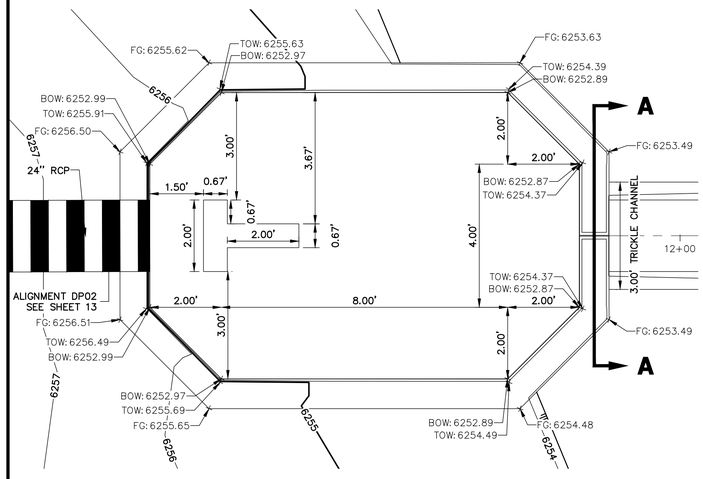
RCP HEADWALL

SCALE: N.T.S.



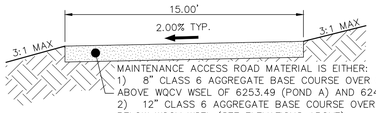
TRICKLE CHANNEL

SCALE: N.T.S.



FOREBAY A2 PLAN VIEW

SCALE: 1" = 2'



MAINTENANCE ACCESS ROAD MATERIAL IS EITHER:
1) 8" CLASS 6 AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE, ABOVE WQCV WSEL OF 6253.49 (POND A) AND 6245.77 (POND B) OR,
2) 12" CLASS 6 AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE, BELOW WQCV WSEL (SEE ELEVATIONS ABOVE).

POND MAINTENANCE ACCESS ROAD TYPICAL SECTION

SCALE: N.T.S.

WALL NOTES:

1. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CDOT STANDARD PLAN M-601-10.
2. WINGWALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CDOT STANDARD PLAN M-601-20.

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONCRETE SHALL BE CLASS D IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
3. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
5. STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT STD. M-206-1.
6. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
7. GRADE 60 REINFORCING STEEL AND EPOXY COATED ARE REQUIRED.
8. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A MINIMUM OF 2" CLEARANCE.
9. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF EXISTING STRUCTURES AND EXISTING UTILITIES, PRIOR TO CONSTRUCTION OF THE CAST-IN-PLACE STRUCTURES. FIELD MODIFICATIONS OF PRECAST UNITS TO ACCOMMODATE CAST-IN-PLACE STRUCTURES WILL ONLY BE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.
11. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

MICHAEL A. BRAMLETT — 32314 — REGISTERED PROFESSIONAL ENGINEER — STATE OF COLORADO

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
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No.	REVISION	BY	DATE

H-SCALE	VARIES
V-SCALE	VARIES
DATE	11/20/20
DESIGNED BY	JBP
DRAWN BY	RPD
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

POND A DETAILS

SHEET 18 OF 32

JOB NO. 25174.00

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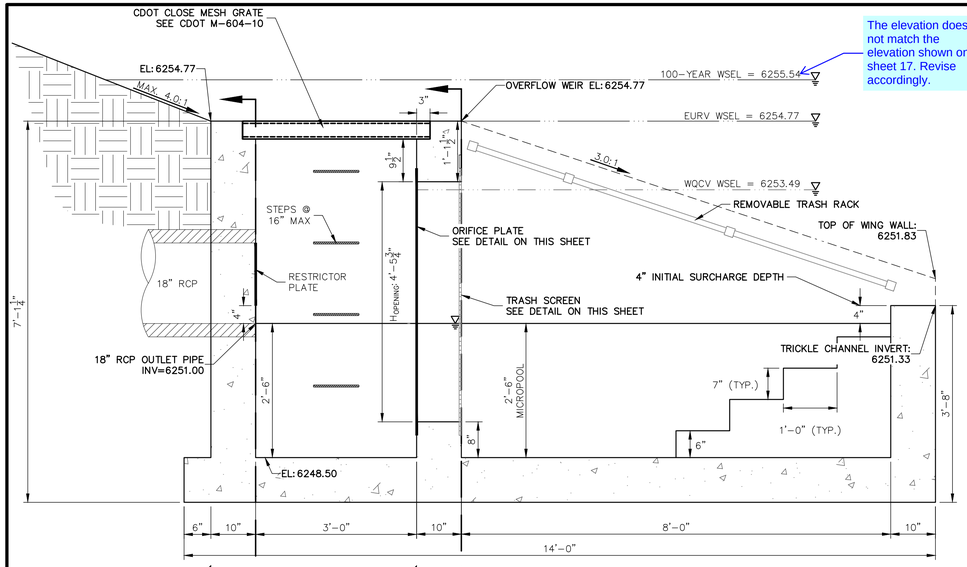
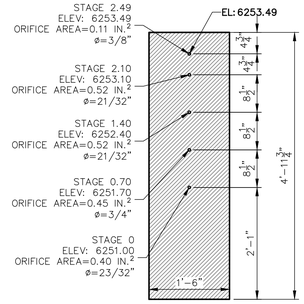


B A POND A OUTLET STRUCTURE – PROFILE
SCALE: 3/4"=1'

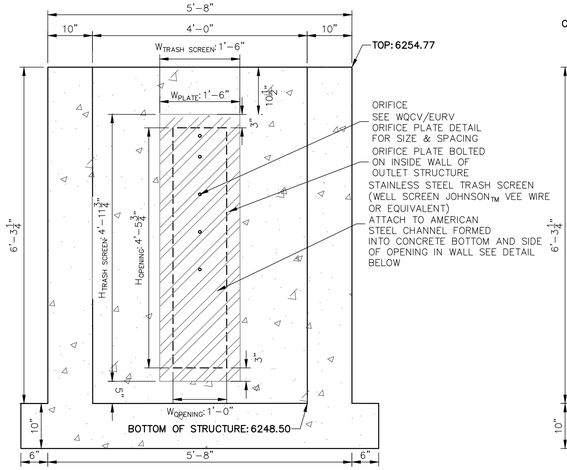
The elevation does not match the elevation shown on sheet 17. Revise accordingly.

100 year WSEL revised according to calculations

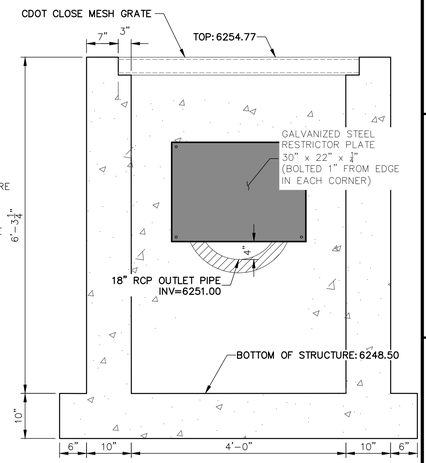
EURV/WQCV ORIFICE PLATE:
4'-11.25" x 1'-6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.



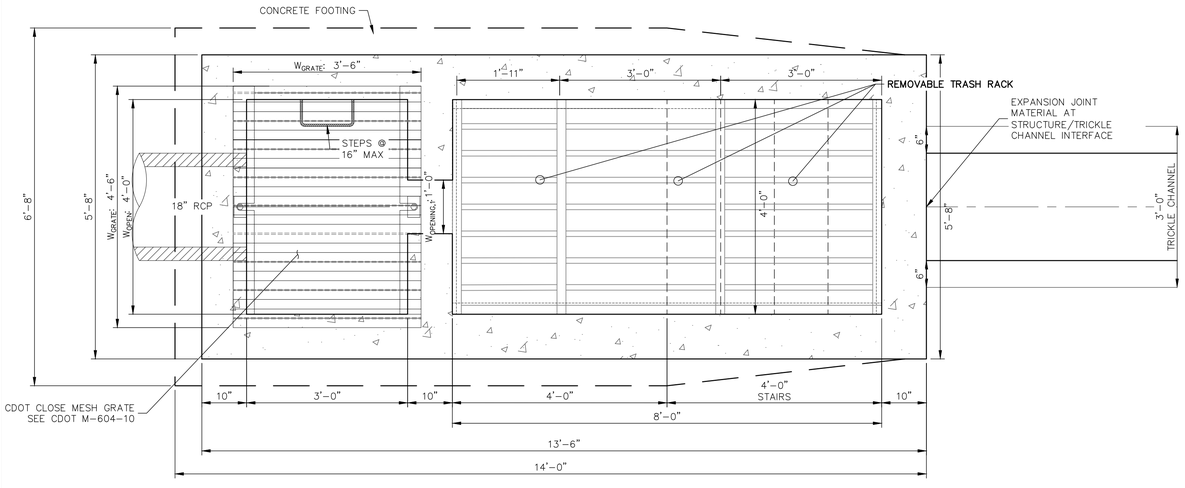
WQCV/EURV ORIFICE PLATE DETAIL
SCALE: 3/4"=1'



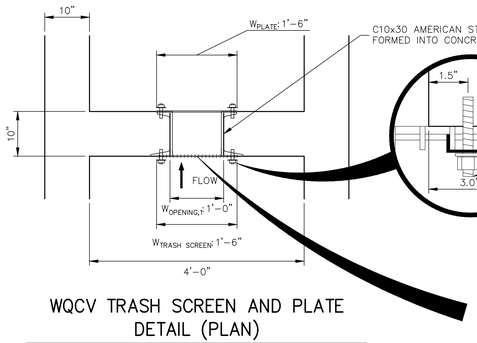
A SECTION A AT ORIFICE (FRONT) WALL
SCALE: 3/4"=1'



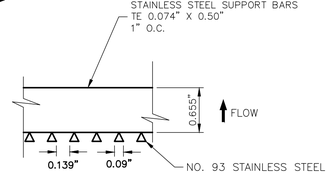
B SECTION B AT OUTLET (REAR) WALL
SCALE: 3/4"=1'



POND A OUTLET STRUCTURE – PLAN
SCALE: 3/4"=1'

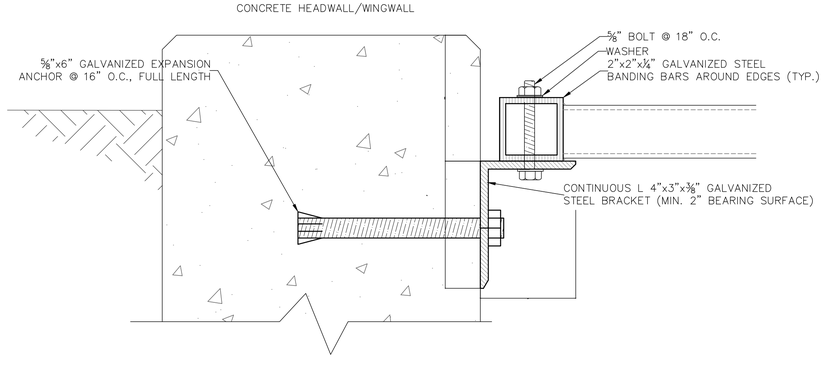


WQCV TRASH SCREEN AND PLATE DETAIL (PLAN)
SCALE: 3/4"=1'



R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL
N.T.S.



TRASH RACK CONNECTION TO WALLS
N.T.S.

OUTLET STRUCTURE STRUCTURAL NOTES:

1. REFER TO CDOT DETAILS M-601-10 AND M-601-20 FOR STRUCTURAL REINFORCEMENT DESIGN.
2. ALL CONCRETE SHALL BE CLASS D IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
4. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
6. STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT STD. M-206-1.
7. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
8. GRADE 60 REINFORCING STEEL AND EPOXY COATED ARE REQUIRED.
9. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A MINIMUM OF 2" CLEARANCE.
10. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF EXISTING STRUCTURES AND EXISTING UTILITIES, PRIOR TO CONSTRUCTION OF THE CAST-IN-PLACE STRUCTURES. FIELD MODIFICATIONS OF PRECAST UNITS TO ACCOMMODATE CAST-IN-PLACE STRUCTURES WILL ONLY BE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.
12. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

OUTLET STRUCTURE PLATE AND GRADING NOTES:

ORIFICE PLATE AND RESTRICTOR PLATE:
1. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
3. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

OVERFLOW GRATE:
5. ALL OVERFLOW GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
6. OVERFLOW GRATES SHALL BE HOT DIP GALVANIZED STEEL AND MAY BE HOT POWDER COATED AFTER GALVANIZING.

ENGINEER'S STATEMENT:

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 3/4" = 1'
V-SCALE 3/4" = 1'
DATE 11/20/20
DESIGNED BY JBP
DRAWN BY RPD
CHECKED BY

SOLACE APARTMENTS – FILING NO. 1

POND A DETAILS

SHEET 19 OF 32

JOB NO. 25174.00

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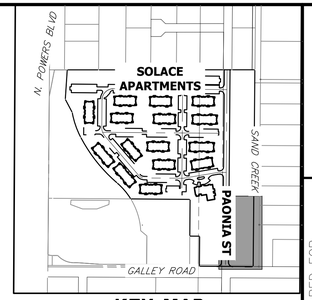
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
B1	TBC/ACCESS ROAD	N: 5025.91 E: 6235.89	6248.51
B2	TBC/ACCESS ROAD	N: 5010.91 E: 6235.77	6248.21
B3	ACCESS ROAD/TOP	N: 5026.87 E: 6305.94	6251.32
B4	ACCESS ROAD	N: 5011.88 E: 6306.15	6250.92
B5	ACCESS ROAD/TOP	N: 5027.46 E: 6348.58	6251.05
B6	ACCESS ROAD	N: 5012.46 E: 6348.79	6250.75
B7	ACCESS ROAD/TOP	N: 5036.54 E: 6369.67	6251.06
B8	ACCESS ROAD	N: 5026.08 E: 6380.43	6250.83
B9	ACCESS ROAD/TOP	N: 5057.87 E: 6378.17	6251.08
B10	ACCESS ROAD	N: 5058.07 E: 6393.17	6250.78
B11	ACCESS ROAD/ SPILLWAY TOP/ CUTOFF WALL	N: 5133.42 E: 6377.13	6251.11
B12	ACCESS ROAD/ SPILLWAY TOP	N: 5133.31 E: 6392.14	6251.11
B13	ACCESS ROAD/ SPILLWAY CREST/ CUTOFF WALL	N: 5148.42 E: 6376.93	6249.61
B14	ACCESS ROAD/ SPILLWAY CREST	N: 5148.31 E: 6391.93	6249.64
B15	ACCESS ROAD/ SPILLWAY CREST/ CUTOFF WALL	N: 5198.41 E: 6376.24	6249.61
B16	ACCESS ROAD/ SPILLWAY CREST	N: 5198.31 E: 6391.25	6249.62
B17	ACCESS ROAD/ SPILLWAY TOP/ CUTOFF WALL	N: 5213.42 E: 6376.04	6251.11
B18	ACCESS ROAD/ SPILLWAY TOP	N: 5213.31 E: 6391.04	6251.11
B19	ACCESS ROAD	N: 5460.05 E: 6372.66	6252.95
B20	ACCESS ROAD	N: 5460.26 E: 6387.66	6252.72

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
B21	ACCESS ROAD	N: 5511.78 E: 6371.95	6253.53
B22	ACCESS ROAD	N: 5511.99 E: 6386.95	6253.23
B23	ACCESS ROAD	N: 5541.49 E: 6371.54	6253.83
B24	ACCESS ROAD	N: 5541.69 E: 6386.54	6253.53
B25	ACCESS ROAD	N: 5469.66 E: 6350.16	6252.52
B26	ACCESS ROAD/TOP	N: 5462.40 E: 6363.28	6252.82
B27	ACCESS ROAD/TOP	N: 5462.64 E: 6346.27	6251.56
B28	ACCESS ROAD/TOE	N: 5433.54 E: 6330.18	6247.58
B29	ACCESS ROAD/TOE	N: 5424.86 E: 6342.52	6247.44
B30	SPILLWAY	N: 5133.27 E: 6398.16	6249.73
B31	SPILLWAY	N: 5213.27 E: 6397.06	6250.52
B32	TOP	N: 5436.74 E: 6370.45	6252.26
B33	ACCESS ROAD/TOP	N: 5395.32 E: 6373.55	6252.29
B34	ACCESS ROAD/TOP	N: 5258.96 E: 6375.41	6251.31
B35	TOP	N: 5038.51 E: 6277.19	6251.14
B36	TOP	N: 5067.19 E: 6265.39	6251.21
B37	TOP	N: 5155.05 E: 6266.10	6250.20
B38	TOP	N: 5242.91 E: 6266.81	6249.42
B39	TOP	N: 5330.77 E: 6267.52	6252.95
B40	TOP	N: 5418.63 E: 6268.23	6252.85

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
B41	TOP	N: 5446.78 E: 6280.21	6253.13
B42	TOP	N: 5458.30 E: 6308.56	6253.40
B43	TOE	N: 5408.79 E: 6348.36	6247.07
B44	TOE	N: 5394.18 E: 6349.56	6246.69
B45	TOE	N: 5258.63 E: 6351.42	6246.12
B46	TOE	N: 5213.09 E: 6352.04	6245.98
B47	TOE	N: 5133.09 E: 6353.14	6245.80
B48	TOE	N: 5060.84 E: 6354.13	6244.32
B49	TOE	N: 5051.46 E: 6344.88	6244.35
B50	TOE	N: 5050.87 E: 6305.61	6245.32
B51	TOE	N: 5055.53 E: 6294.11	6245.51
B52	TOE	N: 5067.00 E: 6289.39	6245.69
B53	TOE	N: 5154.86 E: 6290.10	6245.57
B54	TOE	N: 5242.72 E: 6290.81	6246.28
B55	TOE	N: 5330.57 E: 6291.52	6246.82
B56	TOE	N: 5418.39 E: 6292.23	6246.85
B57	TOE	N: 5429.67 E: 6297.05	6247.13
B58	TOE	N: 5434.30 E: 6308.41	6247.40
B59	OUTLET STRUCTURE	N: 5054.56 E: 6350.61	6243.51
B60	TRICKLE CHANNEL	N: 5066.08 E: 6334.01	6243.61

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
B61	TRICKLE CHANNEL INTERSECTION	N: 5079.32 E: 6325.67	6243.69
B62	TRICKLE CHANNEL	N: 5131.15 E: 6317.27	6243.95
B63	TRICKLE CHANNEL	N: 5158.88 E: 6316.67	6244.09
B64	TRICKLE CHANNEL	N: 5228.73 E: 6324.92	6244.45
B65	TRICKLE CHANNEL	N: 5264.87 E: 6322.59	6244.63
B66	TRICKLE CHANNEL	N: 5297.41 E: 6321.68	6244.79
B67	TRICKLE CHANNEL	N: 5356.40 E: 6333.08	6245.10
B68	TRICKLE CHANNEL	N: 5389.88 E: 6314.94	6245.30
B69	FOREBAY	N: 5395.23 E: 6301.80	6245.37
B70	TRICKLE CHANNEL	N: 5094.53 E: 6313.73	6243.79
B71	FOREBAY	N: 5103.28 E: 6293.07	6243.90
B72	ACCESS ROAD	N: 5426.42 E: 6323.03	6247.25
B73	ACCESS ROAD	N: 5413.47 E: 6330.59	6246.83
B74	ACCESS ROAD	N: 5423.69 E: 6312.77	6247.05
B75	ACCESS ROAD	N: 5408.69 E: 6312.65	6246.47
B76	ACCESS ROAD/TOE	N: 5423.85 E: 6293.26	6246.98
B77	ACCESS ROAD/TOE	N: 5408.86 E: 6292.16	6246.63
B78	ACCESS ROAD/TBC	N: 5297.21 E: 6237.75	6251.81
B79	ACCESS ROAD/TBC	N: 5282.21 E: 6237.63	6251.66
B80	ACCESS ROAD	N: 5297.13 E: 6247.96	6251.97

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
B81	ACCESS ROAD	N: 5282.13 E: 6247.84	6251.81
B82	ACCESS ROAD/TOP	N: 5291.17 E: 6267.20	6251.36
B83	ACCESS ROAD/TOP	N: 5267.23 E: 6267.01	6249.96
B84	ACCESS ROAD	N: 5268.21 E: 6282.14	6249.46
B85	ACCESS ROAD	N: 5265.60 E: 6267.37	6249.76
B86	ACCESS ROAD/TOE	N: 5220.07 E: 6290.63	6246.15
B87	ACCESS ROAD/TOE	N: 5137.47 E: 6289.96	6245.52
B88	WQCV WSEL 12" CLASS 6 ABC BELOW 8" CLASS 6 ABC ABOVE	N: 5159.23 E: 6286.13	6245.77
B89	WQCV WSEL 12" CLASS 6 ABC BELOW 8" CLASS 6 ABC ABOVE/TOE	N: 5179.45 E: 6290.30	6245.77

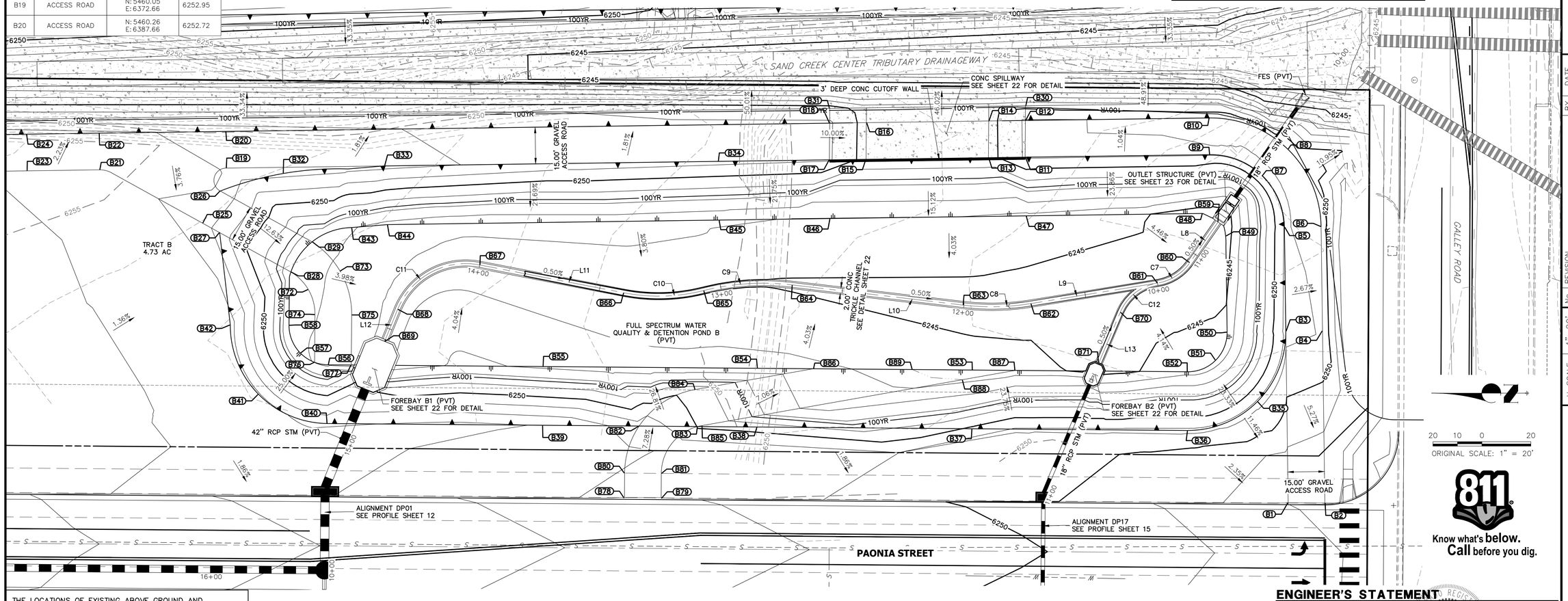


KEY MAP
SCALE 1"=500'

NOTES

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 12–15 FOR PROPOSED STORM SEWER DESIGN.
3. SEE PAONIA STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED PAONIA STREET DESIGN.
4. SEE WATER DISTRIBUTION PLANS AND SANITARY SEWER PLAN AND PROFILE BY JR ENGINERING FOR PROPOSED DESIGN OF CMD–OWNED WATER AND SANITARY UTILITIES.

LINE TABLE			CURVE TABLE			
LINE	BEARING	DISTANCE	CURVE	DELTA	RADIUS	LENGTH
L8	N55°14'37"W	20.21'	C7	46°02'08"	20.00'	16.07'
L9	N09°12'28"W	52.51'	C8	15°56'41"	100.00'	27.83'
L10	N06°44'13"E	70.34'	C9	20°51'49"	100.00'	36.41'
L11	N10°56'24"E	60.08'	C10	25°04'00"	75.00'	32.81'
L12	N67°51'14"W	14.18'	C11	78°47'38"	30.00'	41.26'
L13	S67°02'13"E	22.43'	C12	57°49'45"	20.00'	20.19'



20 10 0 20
ORIGINAL SCALE: 1" = 20'

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

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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No.	REVISION	BY	DATE

H-SCALE	1"=20'
V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	JBP
DRAWN BY	RPD
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

POND B PLAN & CROSS SECTIONS

SHEET 20 OF 32

JOB NO. 25174.00

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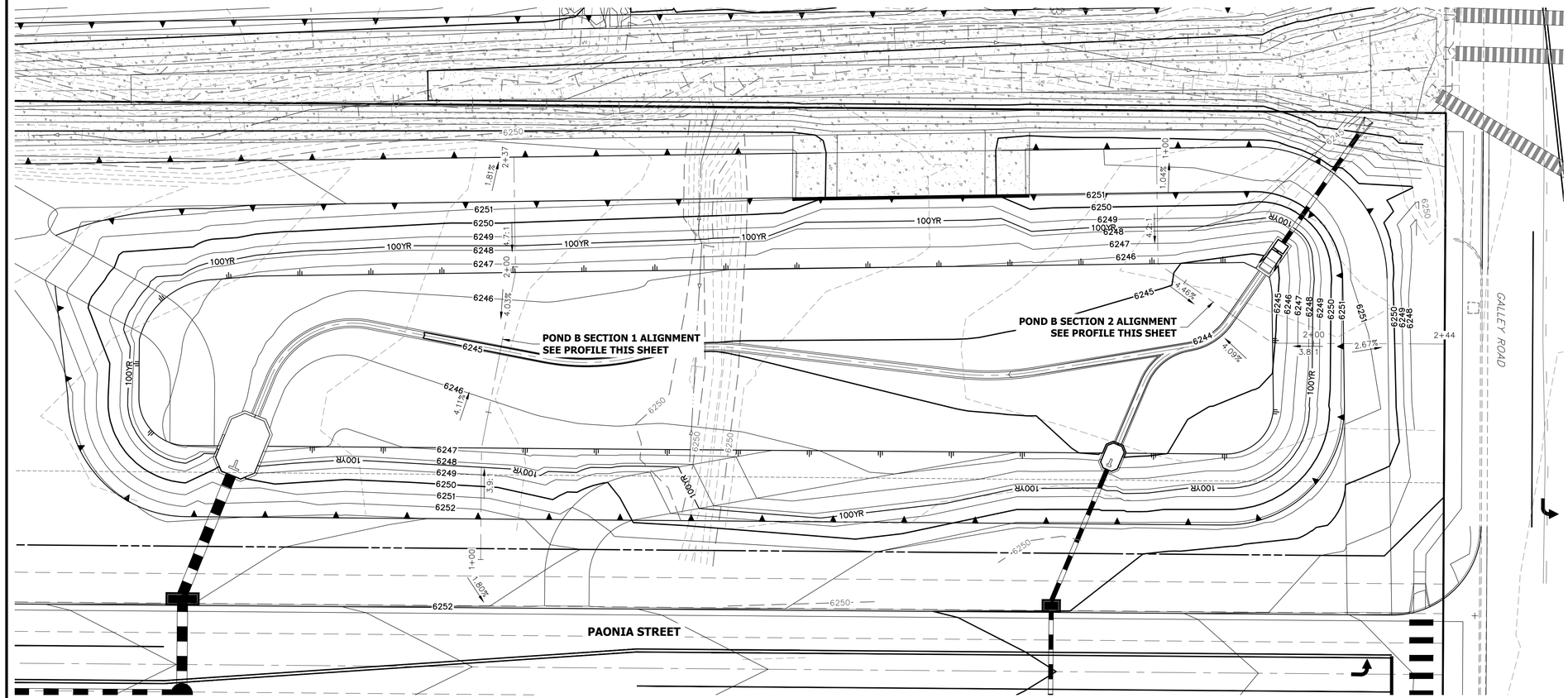
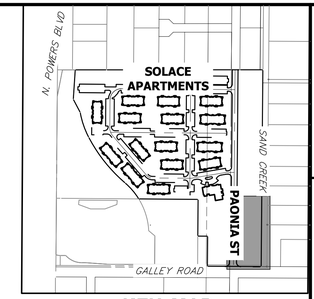
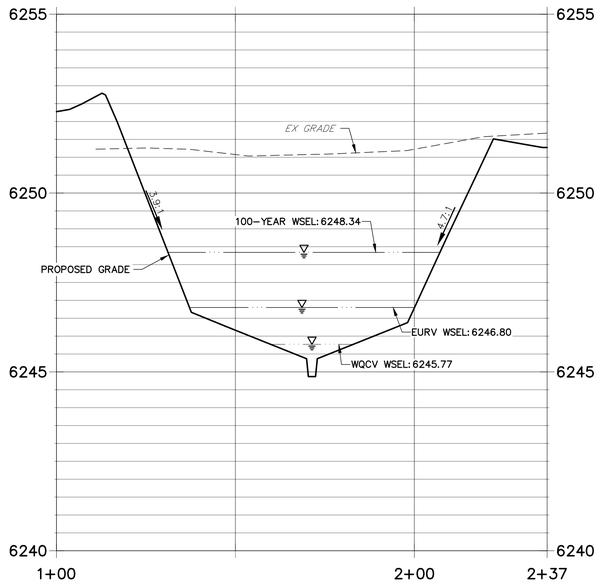


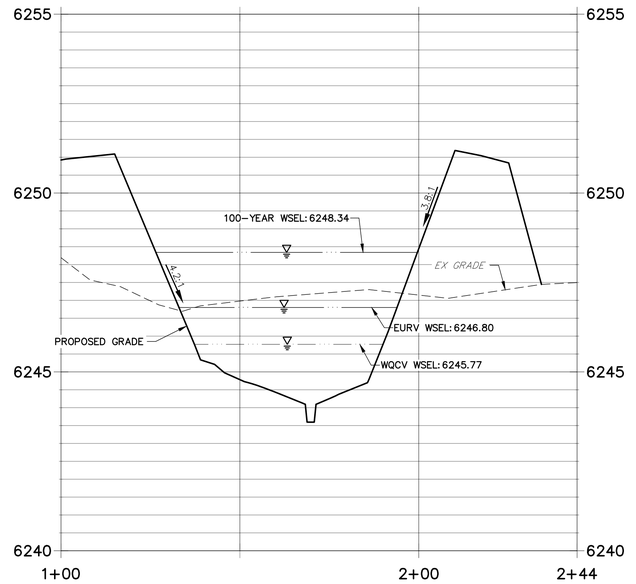


KEY MAP
SCALE 1"=500'

POND B SECTION 1 PROFILE
STA 1+00.00 TO 2+37.11



POND B SECTION 2 PROFILE
STA 1+00.00 TO 2+44.24



NOTES

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3. SEE PAONIA STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED PAONIA STREET DESIGN.
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20 10 0 20
HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

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ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

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NO.	REVISION	BY	DATE

H–SCALE	1"=20'
V–SCALE	1"=2'
DATE	11/20/20
DESIGNED BY	JBP
DRAWN BY	RPD
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1
POND B PLAN & CROSS SECTIONS

SHEET 21 OF 32
JOB NO. 25174.00

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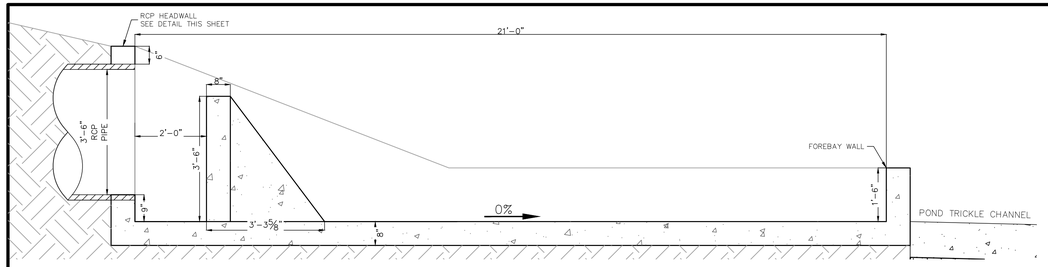
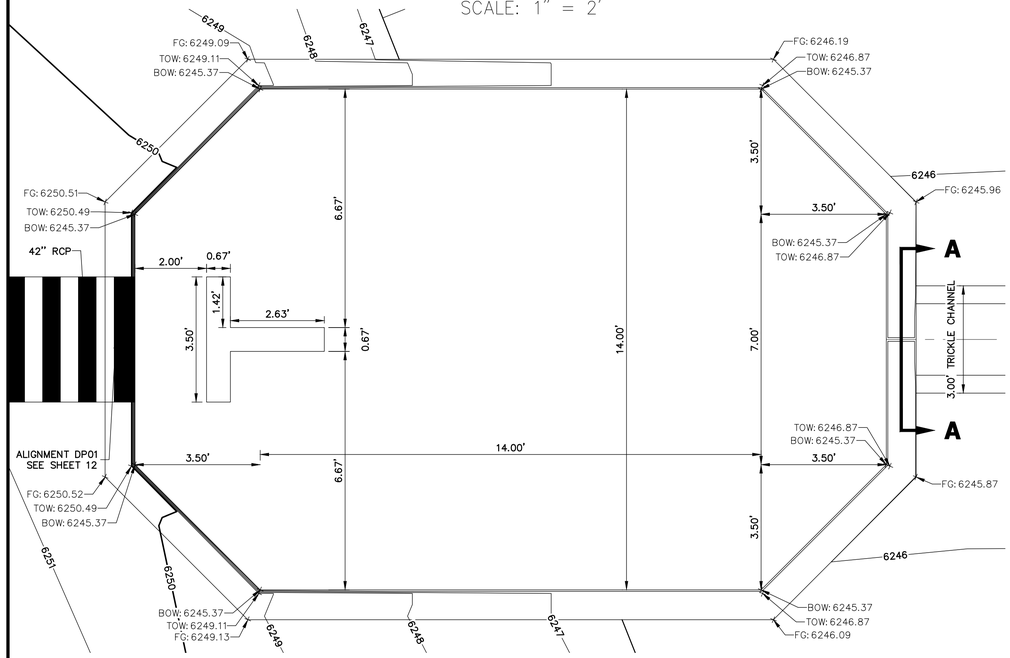


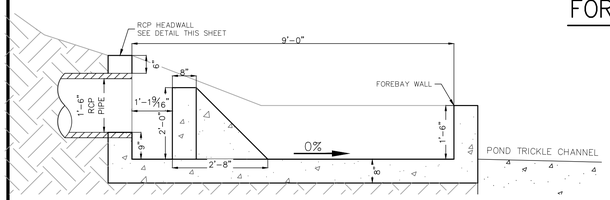
FOREBAY B1 PROFILE VIEW

SCALE: 1" = 2'



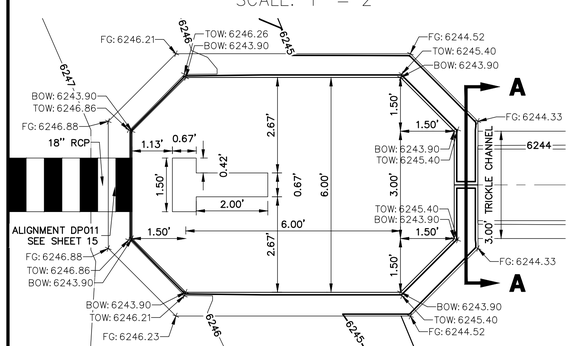
FOREBAY B1 PLAN VIEW

SCALE: 1" = 2'



FOREBAY B2 PROFILE VIEW

SCALE: 1" = 2'

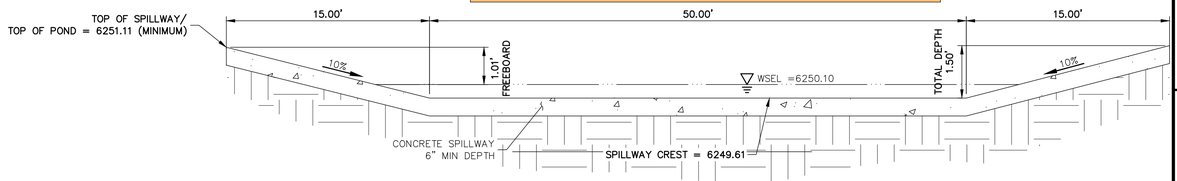


FOREBAY B2 PLAN VIEW

SCALE: 1" = 2'

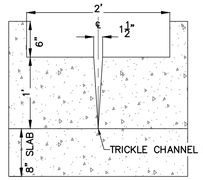
Calculations revised.

length and slopes do not match design calculations. Revise accordingly



POND B EMERGENCY OVERFLOW SPILLWAY

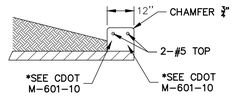
SCALE: N.T.S.



A

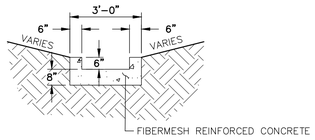
FOREBAY B1 & B2 WALL SECTION

SCALE: 1" = 1'



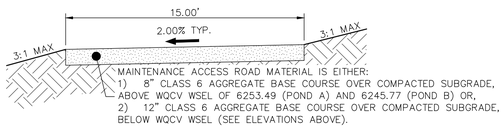
RCP HEADWALL

SCALE: N.T.S.



TRICKLE CHANNEL

SCALE: N.T.S.



MAINTENANCE ACCESS ROAD MATERIAL IS EITHER:
1) 8" CLASS 6 AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE, ABOVE WQCV WSEL OF 6253.49 (POND A) AND 6245.77 (POND B) OR;
2) 12" CLASS 6 AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE, BELOW WQCV WSEL (SEE ELEVATIONS ABOVE).

POND MAINTENANCE ACCESS ROAD TYPICAL SECTION

SCALE: N.T.S.

WALL NOTES:

1. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CDOT STANDARD PLAN M-601-10.
2. WINGWALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CDOT STANDARD PLAN M-601-20.

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONCRETE SHALL BE CLASS D IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
3. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
5. STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT STD. M-206-1.
6. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
7. GRADE 60 REINFORCING STEEL AND EPOXY COATED ARE REQUIRED.
8. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A MINIMUM OF 2" CLEARANCE.
9. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF EXISTING STRUCTURES AND EXISTING UTILITIES, PRIOR TO CONSTRUCTION OF THE CAST-IN-PLACE STRUCTURES. FIELD MODIFICATIONS OF PRECAST UNITS TO ACCOMMODATE CAST-IN-PLACE STRUCTURES WILL ONLY BE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.
11. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

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

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
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OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

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H-SCALE	VARIES	DESIGNED BY	JBP
V-SCALE	VARIES	DRAWN BY	RPD
DATE	11/20/20	CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

POND B DETAILS

SHEET 22 OF 32

JOB NO. 25174.00

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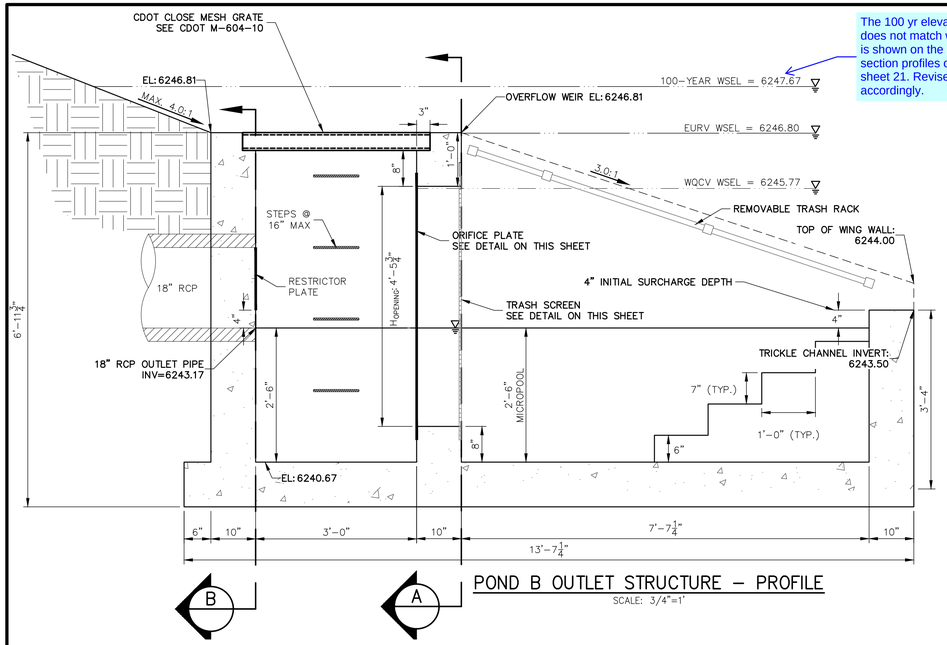


B A

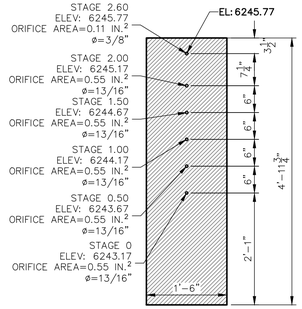
POND B OUTLET STRUCTURE – PROFILE

SCALE: 3/4"=1'

The 100 yr elevation does not match what is shown on the pond section profiles on sheet 21. Revise accordingly.

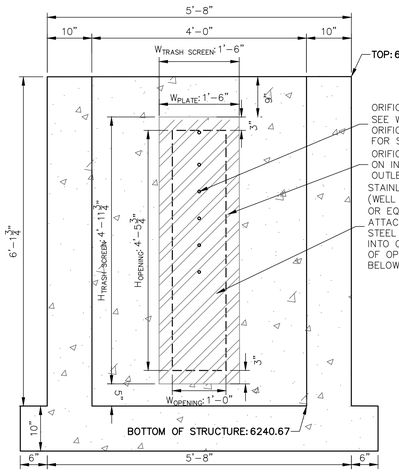
100 year WSEL revised per calculations

EURV/WQCV ORIFICE PLATE:
4'-11.75" x 1'-6" x ½" THICK FLOW GALVANIZED STEEL FLOW CONTROL PLATE. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE. BOLT PLATE TO CONCRETE @ 12" MAX O.C., 1½" FROM PLATE EDGE.



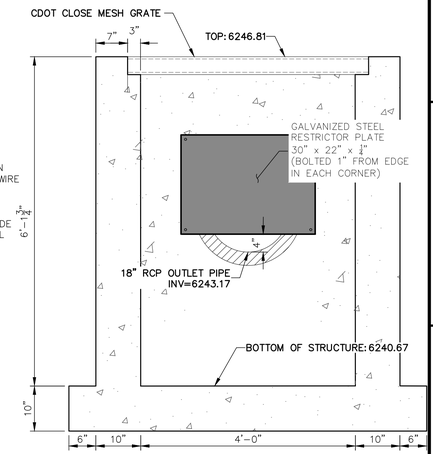
WQCV/EURV ORIFICE PLATE DETAIL

SCALE: 3/4"=1'



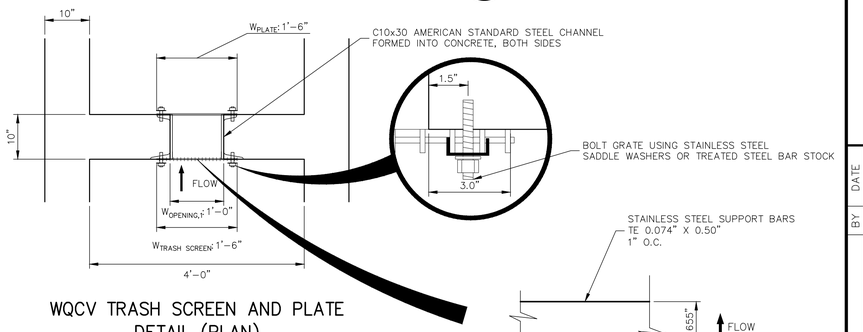
A SECTION A AT ORIFICE (FRONT) WALL

SCALE: 3/4"=1'



B SECTION B AT OUTLET (REAR) WALL

SCALE: 3/4"=1'



WQCV TRASH SCREEN AND PLATE DETAIL (PLAN)

SCALE: 3/4"=1'

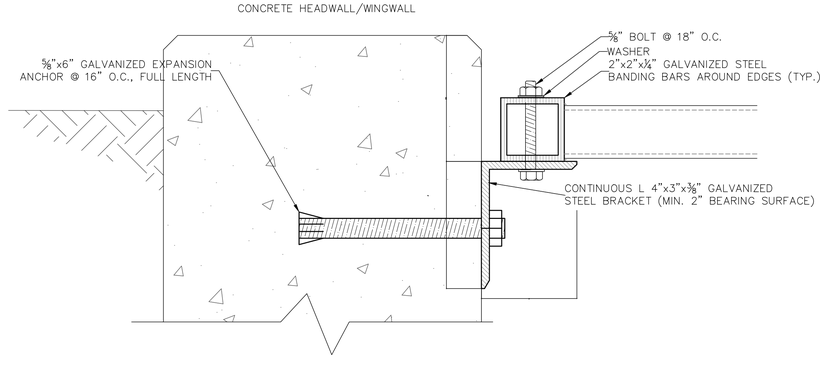
R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.60

TRASH SCREEN DETAIL

N.T.S.

POND B OUTLET STRUCTURE – PLAN

SCALE: 3/4"=1'



TRASH RACK CONNECTION TO WALLS

N.T.S.

OUTLET STRUCTURE STRUCTURAL NOTES:

1. REFER TO CDOT DETAILS M-601-10 AND M-601-20 FOR STRUCTURAL REINFORCEMENT DESIGN.
2. ALL CONCRETE SHALL BE CLASS D IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
4. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
6. STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT STD. M-206-1.
7. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
8. GRADE 60 REINFORCING STEEL AND EPOXY COATED ARE REQUIRED.
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12. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

OUTLET STRUCTURE PLATE AND GRADING NOTES:

ORIFICE PLATE AND RESTRICTOR PLATE:

1. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
3. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

OVERFLOW GRATE:

5. ALL OVERFLOW GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
6. OVERFLOW GRATES SHALL BE HOT DIP GALVANIZED STEEL AND MAY BE HOT POWDER COATED AFTER GALVANIZING.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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V-SCALE	3/4" = 1'
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CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

POND B DETAILS

SHEET 23 OF 32

JOB NO. 25174.00

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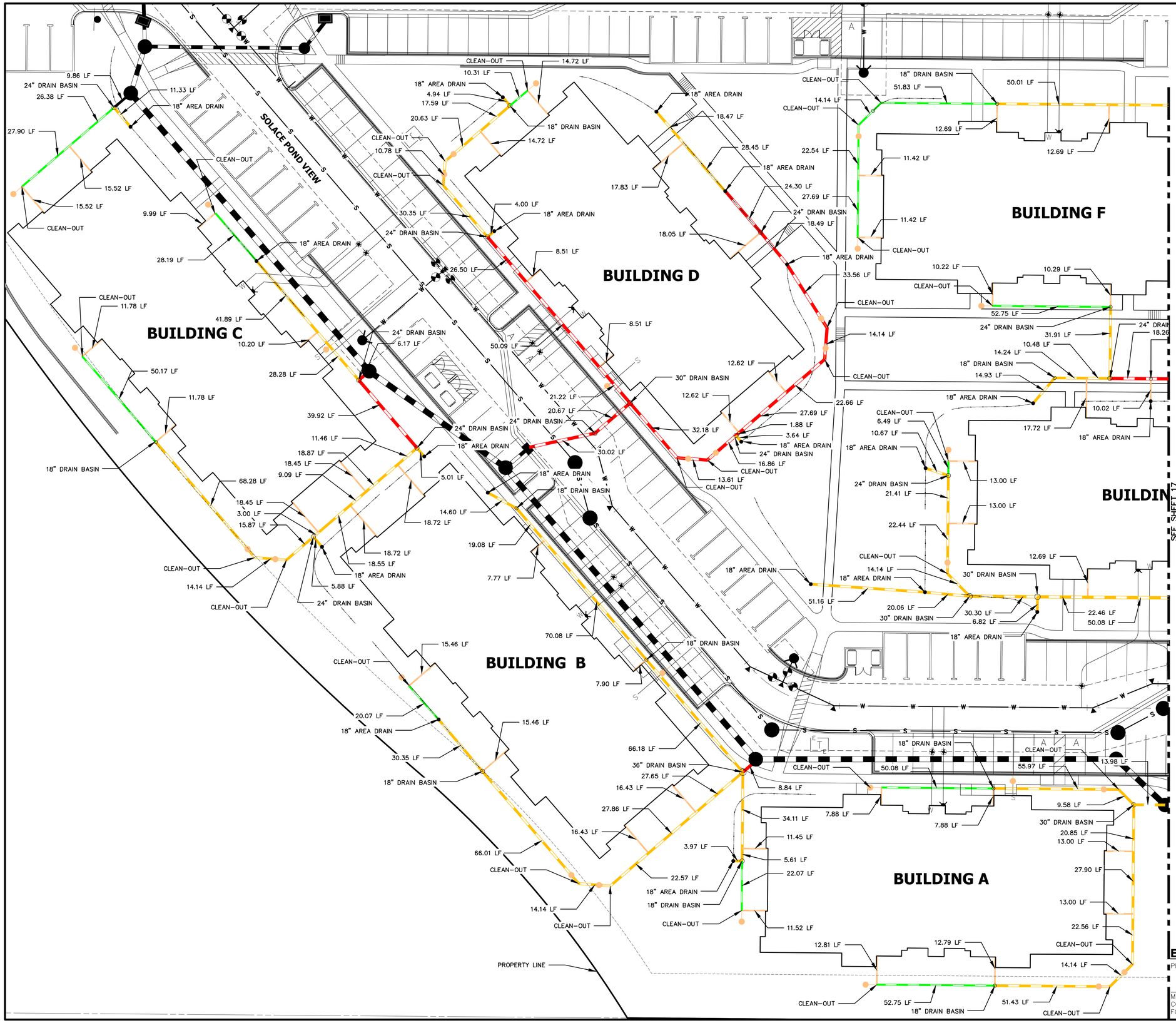

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SEE SHEET 18

SEE SHEET 16

COMMUNITY HEIGHTS

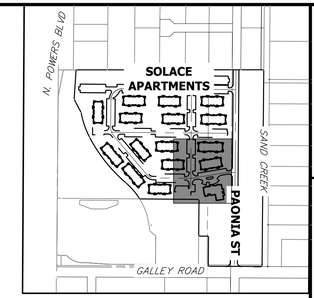
PAONIA STREET

BUILDING H

BUILDING G

CLUBHOUSE & POOL AREA

33.00 LF
24" DRAIN BASIN
62.83 LF
32.44 LF
13.01 LF
27.90 LF
12.88 LF
CLEAN-OUT
To AREA DRAIN
4.00 LF
9.11 LF
CLEAN-OUT
14.14 LF
CLEAN-OUT
48.35 LF
4.47 LF
18" AREA DRAIN
74.50 LF
42.73 LF
24" DRAIN BASIN
12.73 LF
9.99 LF
12.73 LF
33.17 LF
24" DRAIN BASIN
57.37 LF
30" DRAIN BASIN
24" DRAIN BASIN
12.08 LF
22.48 LF
27.90 LF
12.08 LF
CLEAN-OUT
32.48 LF
13.01 LF
27.90 LF
13.01 LF
CLEAN-OUT
13.80 LF
13.63 LF
33.47 LF
24" DRAIN BASIN
50.42 LF
CLEAN-OUT
38.16 LF
6257.90 LF
18" AREA DRAIN
24" DRAIN BASIN
20.59 LF
6257.96 LF
11.27 LF
18" AREA DRAIN
5.29 LF
30.37 LF
24.89 LF
14.14 LF
13.78 LF
CLEAN-OUT
18" AREA DRAIN
13.67 LF
12.58 LF
CLEAN-OUT
19.69 LF
30" DRAIN BASIN
29.92 LF
12.58 LF
7.48 LF
12.58 LF
8.19 LF
30" DRAIN BASIN
12.58 LF
18" AREA DRAIN
22.44 LF
18" AREA DRAIN
27.79 LF
5.77 LF
12.58 LF
30" DRAIN BASIN
9.57 LF
30" DRAIN BASIN
9.05 LF
36" DRAIN BASIN
12.95 LF
9.05 LF
51.13 LF
12.54 LF
13.84 LF
38.25 LF
18" AREA DRAIN
56.24 LF
23.94 LF
CLEAN-OUT
12.69 LF
36" DRAIN BASIN
22.54 LF
CLEAN-OUT
14.14 LF
52.75 LF
39.50 LF
24.80 LF
18" DRAIN BASIN
24.00 LF
24" DRAIN BASIN
26.62 LF
CLEAN-OUT
14.14 LF
CLEAN-OUT
11.96 LF
17.75 LF
18" AREA DRAIN
27.59 LF
12.28 LF
12.84 LF
18" AREA DRAIN
14.86 LF
12.34 LF
43.95 LF
36" DRAIN BASIN
43.38 LF
49.18 LF
CLEAN-OUT
18" DRAIN BASIN
66.45 LF
24" DRAIN BASIN
25.02 LF
37.94 LF
18" AREA DRAIN
18" DRAIN BASIN
74.82 LF
81.67 LF
CLEAN-OUT
CLEAN-OUT



KEY MAP
SCALE 1"=500'

LEGEND
- 6" HDPE
- 8" HDPE
- 12" HDPE
- 15" HDPE
- CLEAN-OUT
- AREA DRAIN
- DRAIN BASIN

NOTES:
1. ALL PIPES SHALL BE INSTALLED SUCH THAT THE TOP OF PIPE IS 12" MINIMUM BELOW GRADE. 18" IS PREFERRED.
2. THE MINIMUM PIPE SLOPE FOR 15" PIPES SHALL BE 0.75%. ALL OTHER PIPES SHALL MAINTAIN A 0.5% MINIMUM.
3. ALL 6" ROOFDRAINS AT BUILDING SHALL BE INSTALLED WITH A CLEAN-OUT AT POINT WHERE DRAIN GOES BELOW GROUND, OR WITHIN 2 FEET OF BUILDING FACE.
4. SEE SHEET XX FOR CLEAN-OUT, DRAIN BASIN, AND AREA DRAIN DETAILS.
5. ALL ROOF DRAINS & AREA DRAINS SHALL BE PRIVATE.

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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JACKSON DEARBORN PARTNERS
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Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

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H-SCALE	1"=20'	DESIGNED BY	GVT
V-SCALE	N/A	DRAWN BY	GVT
DATE	11/20/20	CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

ROOF DRAIN AND AREA DRAIN PLANS

SHEET 25 OF 32

JOB NO. 25174.00

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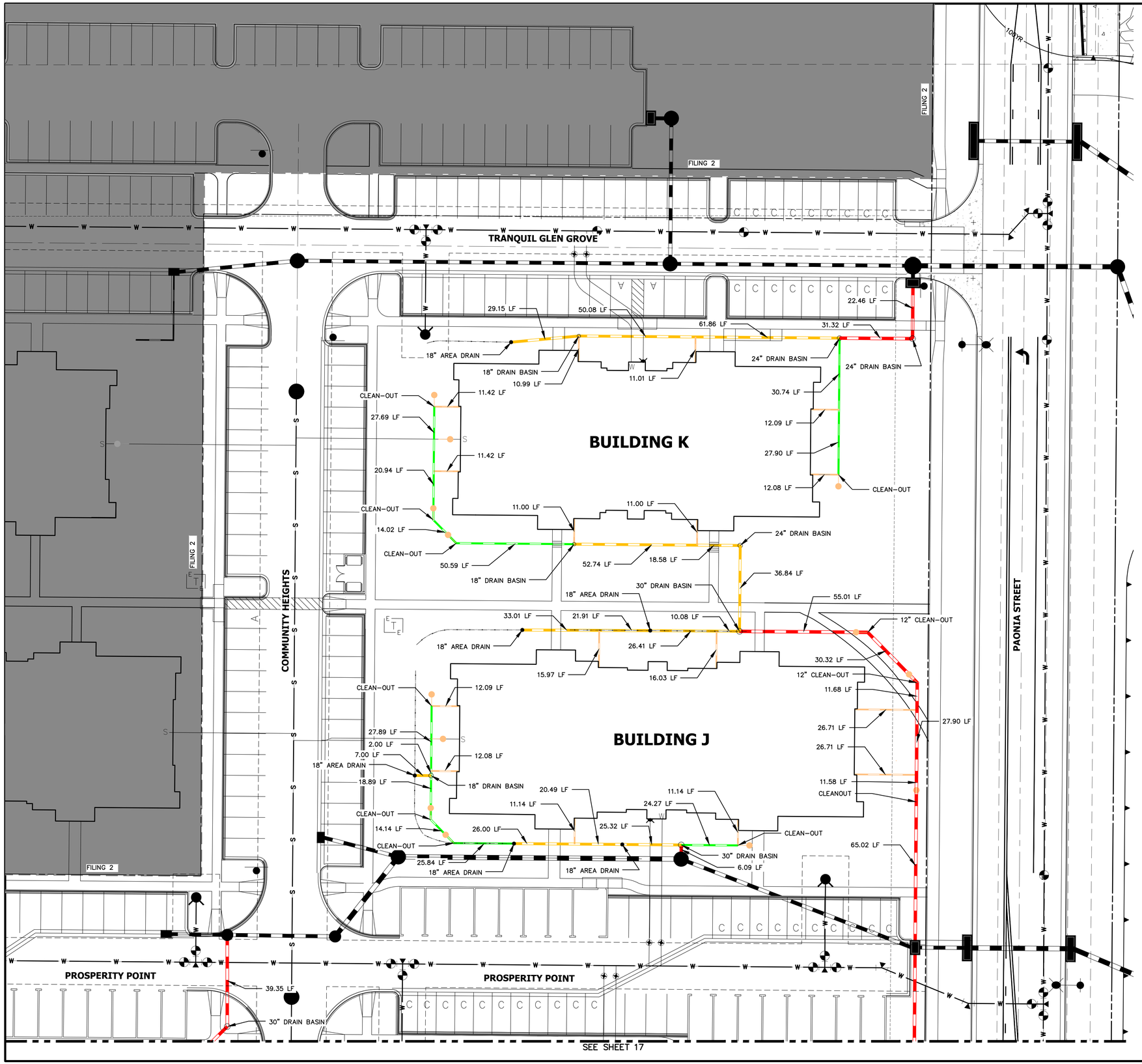

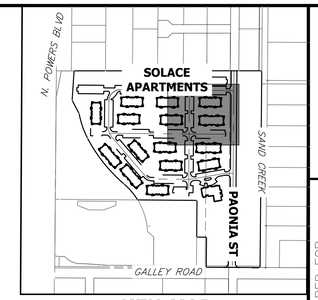

KEY MAP
SCALE 1"=500'

LEGEND

6" HDPE	
8" HDPE	
12" HDPE	
15" HDPE	
CLEAN-OUT	●
AREA DRAIN	•
DRAIN BASIN	○

NOTES:

1. ALL PIPES SHALL BE INSTALLED SUCH THAT THE TOP OF PIPE IS 12" MINIMUM BELOW GRADE. 18" IS PREFERRED.
2. THE MINIMUM PIPE SLOPE FOR 15" PIPES SHALL BE 0.75%. ALL OTHER PIPES SHALL MAINTAIN A 0.5% MINIMUM.
3. ALL 6" ROOFDRAINS AT BUILDING SHALL BE INSTALLED WITH A CLEAN-OUT AT POINT WHERE DRAIN GOES BELOW GROUND, OR WITHIN 2 FEET OF BUILDING FACE.
4. SEE SHEET XX FOR CLEAN-OUT, DRAIN BASIN, AND AREA DRAIN DETAILS.
5. ALL ROOF DRAINS & AREA DRAINS SHALL BE PRIVATE.

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

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

ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC DATE

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V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	GVT
DRAWN BY	GVT
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

ROOF DRAIN AND AREA DRAIN PLANS

SHEET 26 OF 32

JOB NO. 25174.00

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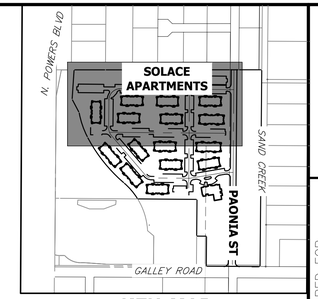
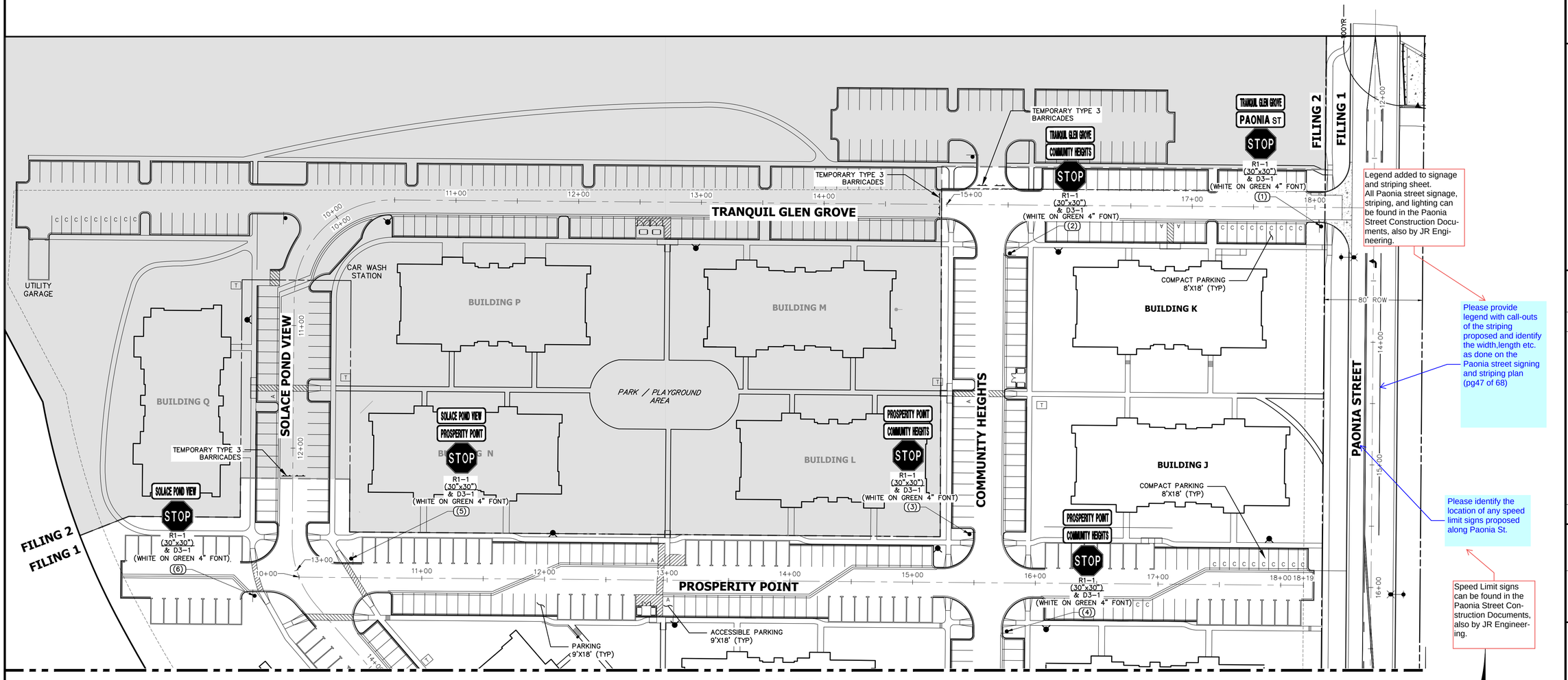
SIGNAGE TABLULATION				
POINT NUMBER	STATION	OFFSET	ALIGNMENT	DESCRIPTION
(1)	18+05.22	15.51' (RT)	TRANQUIL GLEN GROVE	30X30 R1-1 (1) 30X9 D3-1 (2)
(2)	15+51.69	39.52' (RT)	TRANQUIL GLEN GROVE	30X30 R1-1 (1) 30X9 D3-1 (2)
(3)	15+46.07	39.51' (LT)	PROSPERITY PT CL	30X30 R1-1 (1) 30X9 D3-1 (2)
(4)	15+77.07	39.51' (RT)	PROSPERITY PT CL	30X30 R1-1 (1) 30X9 D3-1 (2)
(5)	10+42.33	15.50' (LT)	PROSPERITY PT CL	30X30 R1-1 (1) 30X9 D3-1 (2)
(6)	13+06.49	39.28' (RT)	SOLACE POND VIEW CL	30X30 R1-1 (1) 30X9 D3-1 (1)



KEY MAP
SCALE 1"=500'



SEE SHEET 28

Legend added to signage and striping sheet. All Paonia street signage, striping, and lighting can be found in the Paonia Street Construction Documents, also by JR Engineering.

Please provide legend with call-outs of the striping proposed and identify the width,length etc. as done on the Paonia street signing and striping plan (pg47 of 68)

Please identify the location of any speed limit signs proposed along Paonia St.

Speed Limit signs can be found in the Paonia Street Construction Documents, also by JR Engineering.

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
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FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER — DATE

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V-SCALE	N/A		
DATE	11/20/20		
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DRAWN BY	GVT		
CHECKED BY			

SOLACE APARTMENTS – FILING NO. 1
SIGNAGE AND STRIPING PLAN

SHEET 27 OF 32
JOB NO. 25174.00

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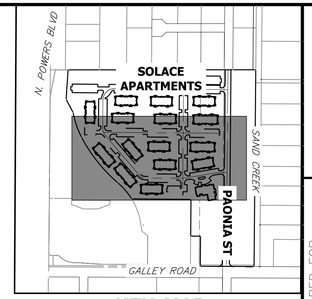
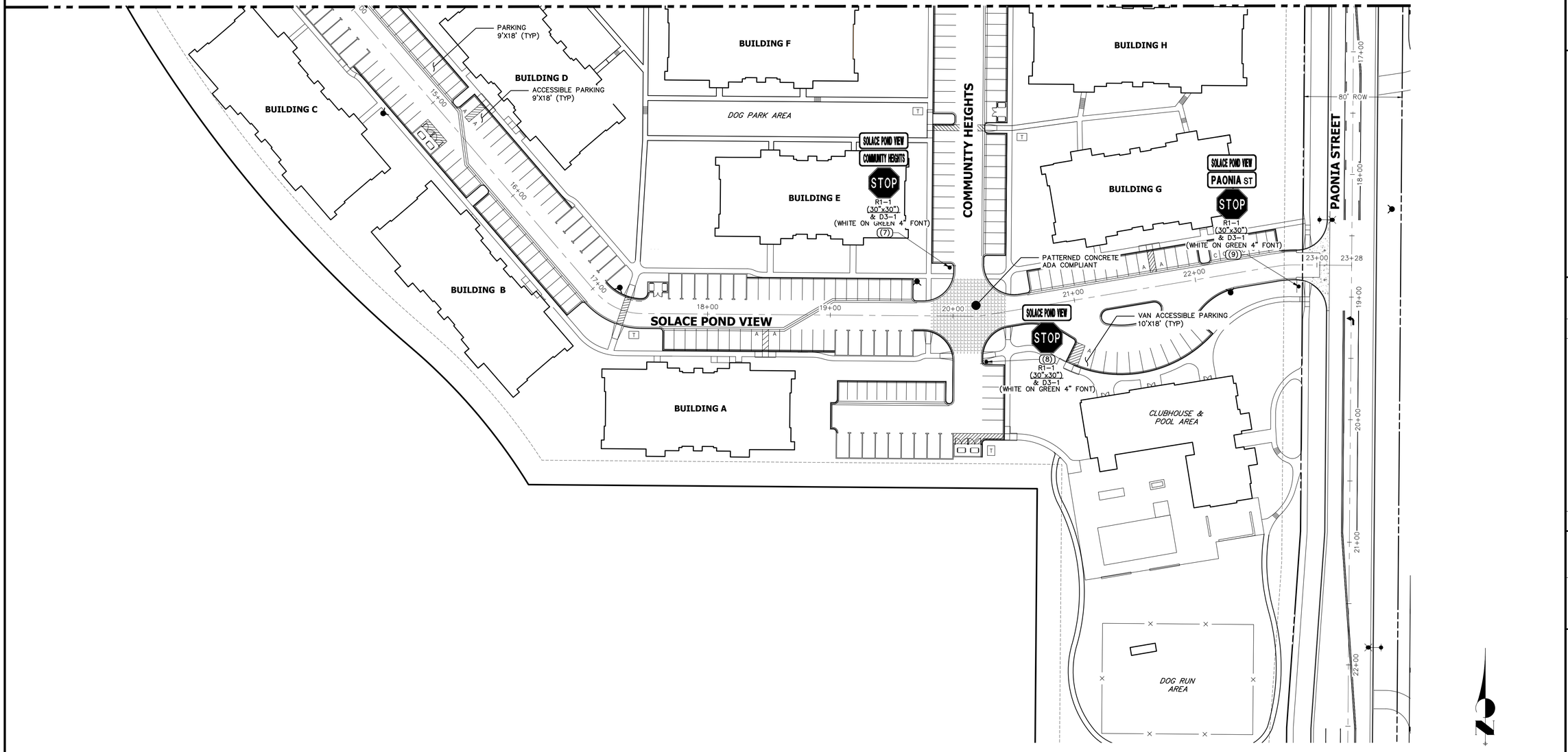
SIGNAGE TABLULATION				
POINT NUMBER	STATION	OFFSET	ALIGNMENT	DESCRIPTION
(7)	19+96.97	39.50' (LT)	SOLACE POND VIEW CL	30X30 R1-1 (1) 30X9 D3-1 (2)
(8)	20+20.92	37.75' (RT)	SOLACE POND VIEW CL	30X30 R1-1 (1) 30X9 D3-1 (1)
(9)	22+85.32	17.57' (RT)	SOLACE POND VIEW CL	30X30 R1-1 (1) 30X9 D3-1 (2)



KEY MAP
SCALE 1"=500'

SEE SHEET 27



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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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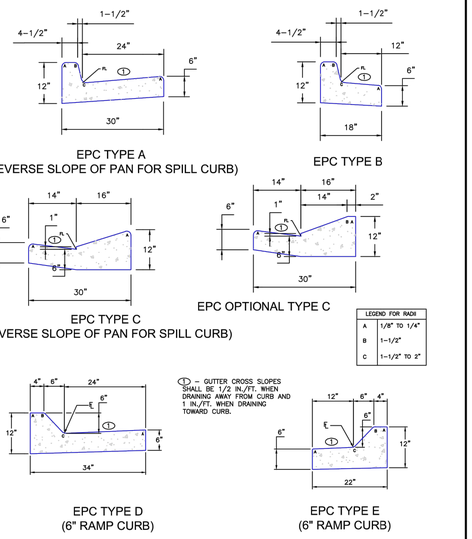
SOLACE APARTMENTS – FILING NO. 1

SIGNAGE AND STRIPING PLAN

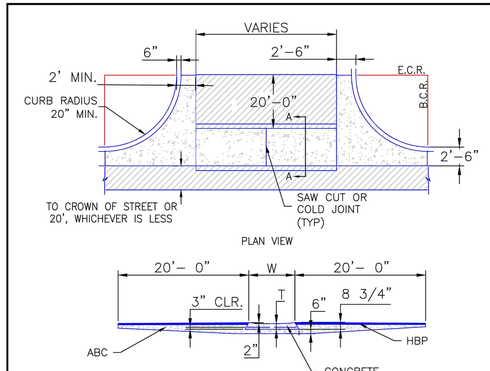
SHEET 28 OF 32

JOB NO. 25174.00

x:\25100\00.all\25174\00\Drawings\sheet dwgs\Construction Drawings\25174\00-SG01.dwg, Phase 1 (south), 11/25/2020 12:11:30 PM, GE



8/11/11	Typical Curb and Gutter Details	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 12/8/15	FILE NAME: SD_2-20
DEPARTMENT OF TRANSPORTATION		



NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

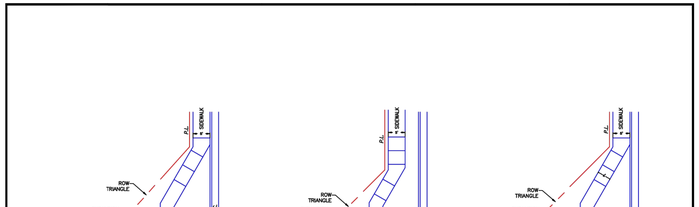
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. ▨ = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).

4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

8/11/11	Typical Cross Pan Layout Detail	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 12/8/15	FILE NAME: SD_2-26
DEPARTMENT OF TRANSPORTATION		



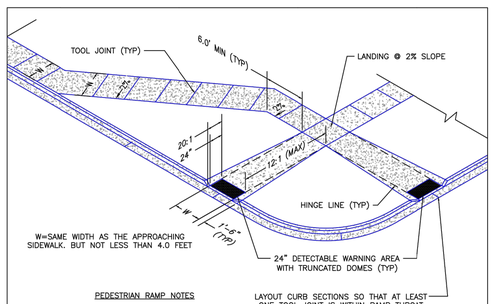
SCALE: NOT TO SCALE

9/16/10	Pedestrian Intersection Ramp Detail	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 11/10/04	FILE NAME: SD_2-40
DEPARTMENT OF TRANSPORTATION		

Please replace with the latest county detail.

Detail updated to latest version

Details updated per latest revisions.



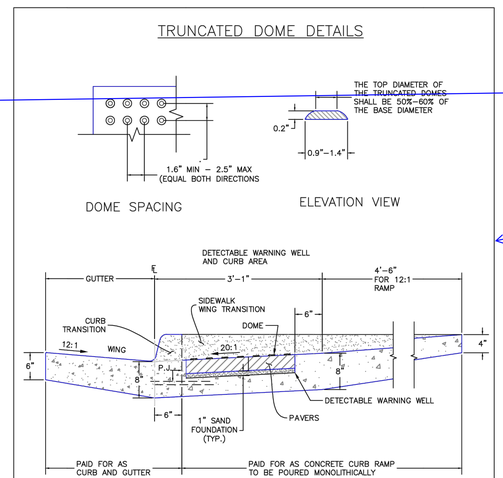
PEDESTRIAN RAMP NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON–COLORED, NON–SCORED, COARSE BROOM FINISH.
4. RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 12:1 MAXIMUM RUNNING RAMP SLOPE AND 20:1 DETECTABLE WARNING AREA DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS.
5. DETECTABLE WARNING AREA SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING AREA SHALL BE PREFABRICATED, REDDISH INTEGRALLY COLORED, TRUNCATED–DOME, PAVERS. THERMOPLASTIC TRUNCATED DOMES WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING AREA SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
9. ALL RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID–BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL. SUBJECT TO APPROVAL.
10. AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED RAMP AREAS.

GENERAL NOTES

1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA, THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

7/9/09	Pedestrian Intersection Ramp	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 12/8/15	FILE NAME: SD_2-41
DEPARTMENT OF TRANSPORTATION		

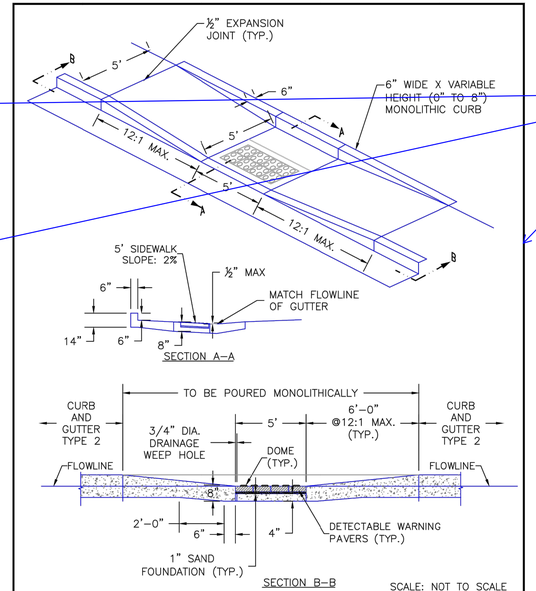


P.J.= PERMISSABLE JOINT WITH EPOXY–COATED DEFORMED NO. 4 BARS CONFORMING TO AASHTO M 284 AT 18 IN. SPACING

SIDE CROSS SECTION VIEW OF
DETECTABLE WARNING, WELL, CURB AND GUTTER

1/1/08	Truncated Dome Details	
DATE APPROVED:	Standard Drawing	
John A. McCarty	REVISION DATE: 11/25/15	FILE NAME: SD_2-42
DEPARTMENT OF TRANSPORTATION		

Please provide the latest PED ramp details (SD_2-40 through 2-42 & SD_2-50) that were recently revised with the adoption of CH6 to the ECM.



8/11/11	Parallel Pedestrian Ramp Detail	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 12/8/15	FILE NAME: SD_2-50
DEPARTMENT OF TRANSPORTATION		

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER — DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
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CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	JRM
V-SCALE	N/A	DRAWN BY	JRM
DATE	11/20/20	CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

DETAIL SHEETS

SHEET 29 OF 32

JOB NO. 25174.00

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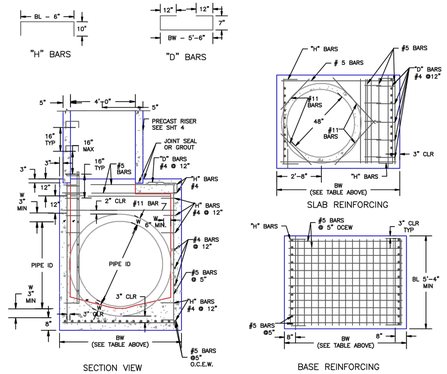


PIPE ID	BW
48" AND SMALLER	6'-4"
54"	6'-10"
60" AND LARGER	OD + 16"

NOTES

1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..

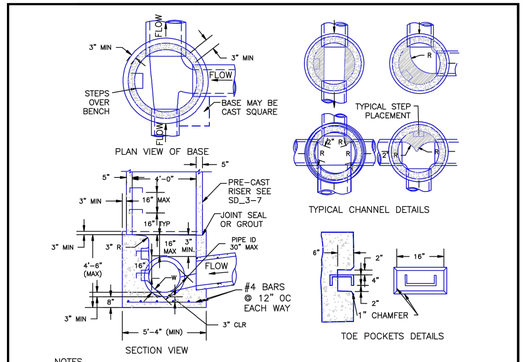
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.

4. FLOOR OF THE MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX., ½" PER FT. MIN). FLOOR SHALL BE SHAPED AND CHANNELED; SEE SD_3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

7/9/09	Storm Sewer Manhole Detail Type I Standard Drawing	
DATE APPROVED:	REVISION DATE: 7/9/09	FILE NAME: SD_3-1
André Brackin, DEPARTMENT OF TRANSPORTATION		



NOTES

1. TYPE II MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.

2. VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OF STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS IN BASE SHALL BE INSTALLED IN "TOE POCKETS" (SEE DETAIL THIS SHEET). LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.

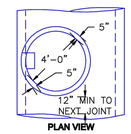
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.

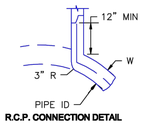
5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., ½" PER FOOT. MIN.).

6. FLOOR OF MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1., ½" PER FT. MIN.) . FLOOR SHALL BE SHAPED AND CHANNELED; SEE DETAILS THIS SHEET.

SCALE: NOT TO SCALE

	Storm Sewer Manhole Detail Type II Standard Drawing	
DATE APPROVED:	REVISION DATE: 11/10/04	FILE NAME: SD_3-2
André P. Brackin, DEPARTMENT OF TRANSPORTATION		





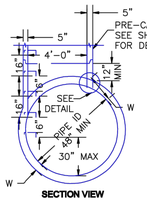
NOTE

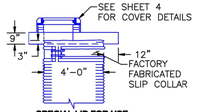
TYPE III MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE FOLLOWING CONDITIONS ARE MET:

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.

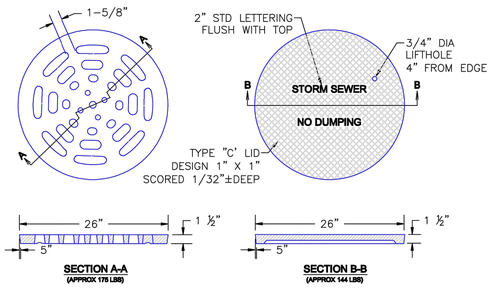
3. EITHER LADDER OR STEPS SHALL BE INSTALLED. LOWEST STEP SHALL BE A MAXIMUM OF 30" ABOVE THE INVERT OF THE PIPE.

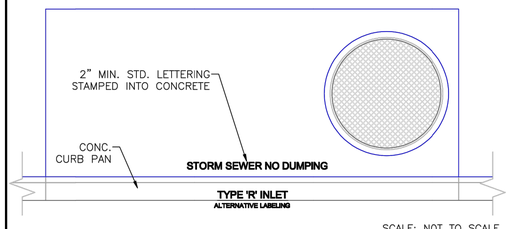




SCALE: NOT TO SCALE

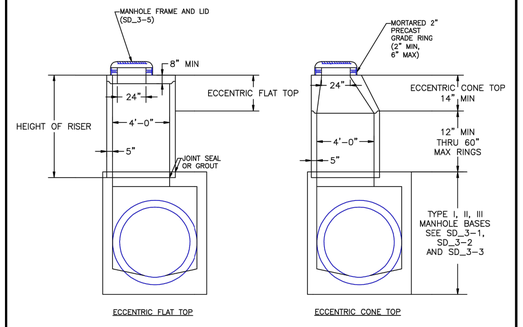
8/11/11	Storm Sewer Manhole Type III Standard Drawing	
DATE APPROVED:	REVISION DATE: 11/10/04	FILE NAME: SD_3-3
André P. Brackin, DEPARTMENT OF TRANSPORTATION		





SCALE: NOT TO SCALE

9/16/10	Storm Sewer Manhole Details Standard Drawing	
DATE APPROVED:	REVISION DATE: 9/16/10	FILE NAME: SD_3-5
André P. Brackin, DEPARTMENT OF TRANSPORTATION		



NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS APPLICABLE TO THE PROJECT.
2. PRECAST RISERS SHALL CONFORM TO ASTM C478.
3 STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS SHALL BE CAST IRON OR EXTRUDED ALUMINUM, 1000 LB CAPACITY, 12" WIDE WITH NON-SKID GROOVES AND DROP FRONT ON SAFETY NOSES, IN ACCORDANCE WITH APPROVED OSHA REQUIREMENTS.

SCALE: NOT TO SCALE

8/11/11	Storm Sewer Manhole Riser and Cover Detail Standard Drawing	
DATE APPROVED:	REVISION DATE: 11/23/04	FILE NAME: SD_3-7
André P. Brackin, DEPARTMENT OF TRANSPORTATION		

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
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No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	JRM
V-SCALE	N/A	DRAWN BY	JRM
DATE	11/20/20	CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

DETAIL SHEETS

SHEET 30 OF 32

JOB NO. 25174.00

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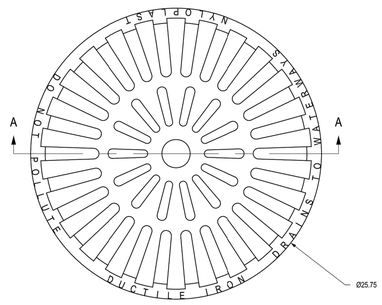
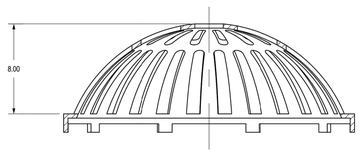
2499CGD

APPROX. DRAIN AREA = 270.64 SQ IN
APPROX. WEIGHT = 53.00 LBS





SECTION A-A

DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

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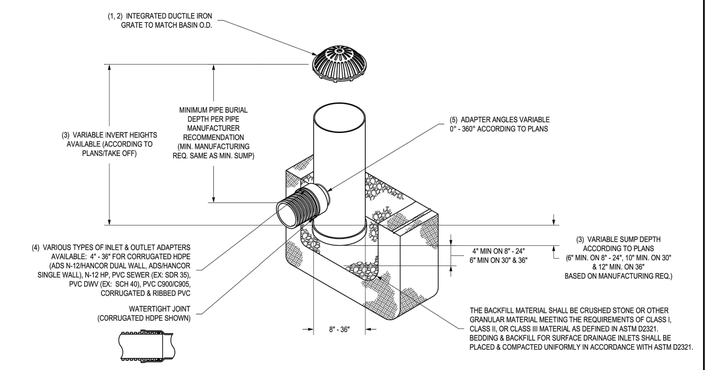
DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-8-06		
REVISED BY	EBC	PROJECT NO./NAME	
DATE	3-24-11		
DWG SIZE	A	SCALE 1:6	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 24 IN DOME GRATE
DWG NO. 7001-110-219 REV D

NYLOPLAST DRAIN BASIN WITH DOME GRATE



1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 36").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

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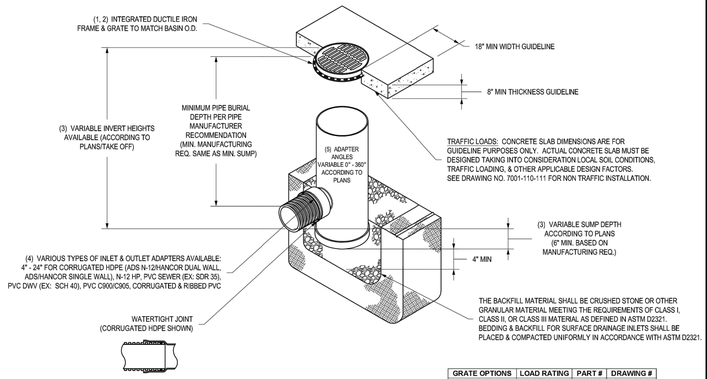
DRAWN BY	EBC	MATERIAL	
DATE	03-25-10		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	06-12-18		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH DOME GRATE
QUICK SPEC INSTALLATION DETAIL
DWG NO. 7001-110-207 REV E

NYLOPLAST 24" DRAIN BASIN: 2824AG _ _X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	2499CGP	7001-110-216
STANDARD	MEETS H-20	2499CGS	7001-110-217
SOLID COVER	MEETS H-20	2499CGC	7001-110-218
DOME	N/A	2499CGD	7001-110-219
DROP IN GRATE	LIGHT DUTY	2401DI	7001-110-075

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DRAWN BY	EBC	MATERIAL	
DATE	04-03-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-14-16		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

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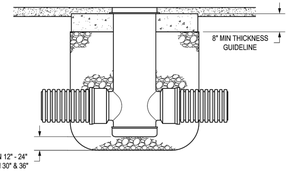
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

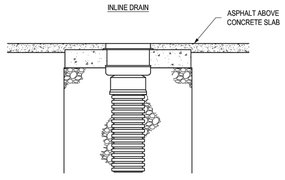
TITLE: 24 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DWG NO. 2401D 7001-110-192 REV E

ASPHALT INSTALLATION

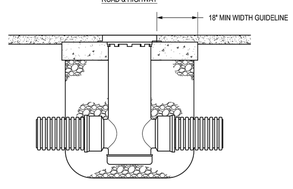
DRAIN BASIN



INLINE DRAIN



ROAD & HIGHWAY



STRUCTURE SIZE	H-20 GRATE OPTIONS				
12"	N/A	STANDARD	SOLID	2X2 R&H	N/A
15"	N/A	STANDARD	SOLID	2X2 R&H	N/A
18"	N/A	STANDARD	SOLID	2X2 R&H	2X3 R&H
24"	N/A	STANDARD	SOLID	2X2 R&H	2X3 R&H
30"	PEDESTRIAN	STANDARD	SOLID	2X2 R&H	2X3 R&H
36"	PEDESTRIAN	STANDARD	SOLID	2X2 R&H	2X3 R&H

1 - THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.
2 - TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS.

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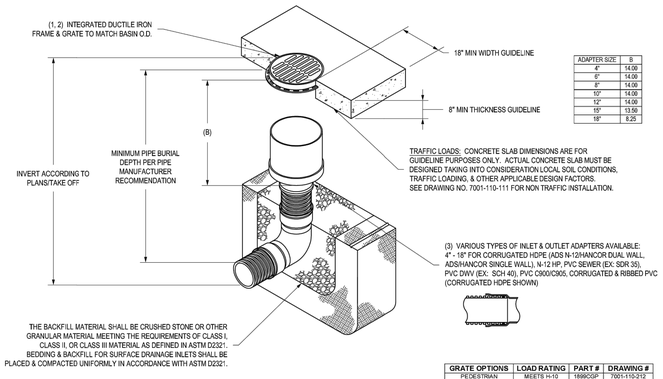
DRAWN BY	EBC	MATERIAL	
DATE	4-4-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	06-12-18		
DWG SIZE	A	SCALE 1:30	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: DRAIN BASIN, INLINE DRAIN, & ROAD & HIGHWAY
(H-20 TRAFFIC LOAD) ASPHALT INSTALLATION DETAIL
DWG NO. 7001-110-188 REV F

NYLOPLAST 18" INLINE DRAIN: 2718AG _ _X



ADAPTER SIZE	B
4"	14.00
6"	14.00
8"	14.00
10"	14.00
12"	14.00
15"	13.50
18"	8.25

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1899CGP	7001-110-212
STANDARD	MEETS H-20	1899CGS	7001-110-213
SOLID COVER	MEETS H-20	1899CGC	7001-110-214
DOME	N/A	1899CGD	7001-110-215
DROP IN GRATE	LIGHT DUTY	1801DI	7001-110-074

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
4 - DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.
5 - DIMENSIONS ARE IN INCHES
6 - SEE DRAWING NO. 7001-110-275 FOR ADS N-12 & HANCOR DUAL WALL BELL INFORMATION & DRAWING NO. 7001-110-364 FOR N-12 HP BELL INFORMATION.

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REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-15-16		
DWG SIZE	A	SCALE 1:30	SHEET 1 OF 1

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FAX (770) 932-2490
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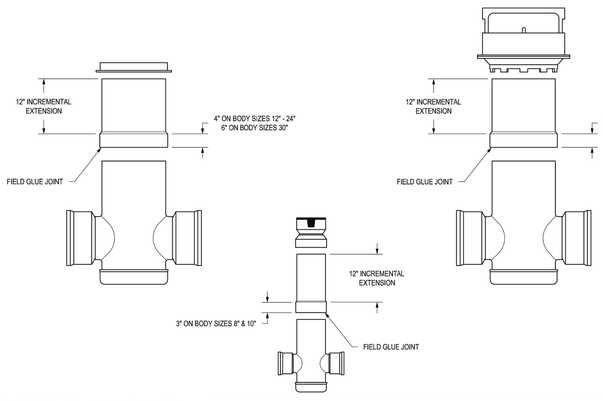
TITLE: 18 IN INLINE DRAIN QUICK SPEC INSTALLATION DETAIL
DWG NO. 7003-110-027 REV E

NYLOPLAST RISER EXTENSION: 29 _ _AG



1. NYLOPLAST RISER JOINTS SHALL BE FIELD INSTALLED USING THE GUIDELINES OUTLINED IN ASTM D2855.
2. PVC CEMENT USED SHALL MEET THE REQUIREMENTS OF ASTM D2564.
3. PVC PRIMER USED SHALL MEET THE REQUIREMENTS OF ASTM F656.

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DRAWN BY	CJA	MATERIAL	
DATE	9-18-09		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	3-22-18		
DWG SIZE	A	SCALE 1:20	SHEET 1 OF 1

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www.nyloplast-us.com

TITLE: 8 IN - 36 IN RISER EXTENSION
DWG NO. 7001-110-065 REV E

Know what's below.
Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, A WESTRIAN COMPANY

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

DETAIL SHEETS

SHEET 31 OF 32

JOB NO. 25174.00

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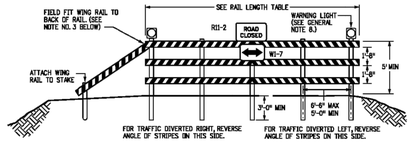

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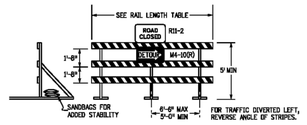
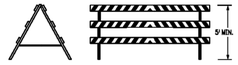


MOVABLE-SKIDS



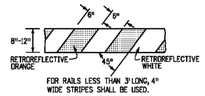
MOVABLE-HINGED

TYPICAL TYPE 3 BARRICADES

1. TYPE 3 BARRICADES HAVE 3 REFLECTORIZED RAIL FACES IF FACING TRAFFIC IN ONE DIRECTION AND 6 IF FACING TRAFFIC IN TWO DIRECTIONS.
2. THE PORTION OF THE POST ABOVE THE GROUND LINE SHALL BE PAINTED IN ACCORDANCE WITH THE APPROPRIATE GENERAL NOTE.
3. DETACHABLE EXTENSION WING RAILS FOR BYPASSING OF CONSTRUCTION EQUIPMENT ARE PERMITTED, WHEN NECESSARY, ON FIXED OR MOVABLE TYPE 3 BARRICADES. THE LENGTH SHALL BE ADEQUATE TO CLOSE THE BORROW PIT AND/OR SHOULDER AS REQUIRED.

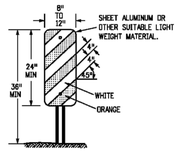
RAIL LENGTH TABLE

TYPE 3 BARRICADE		LENGTH
FIXED	MOVABLE	
F - A	M - A	8'- 14'
F - B	M - B	15'- 24'
F - C	M - C	25'- 35'
F - D	M - D	> 35'



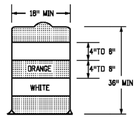
FOR RAILS LESS THAN 3' LONG, 4" WIDE STRIPES SHALL BE USED.

RAIL STRIPING DETAIL



TYPICAL VERTICAL PANEL

1. IF SPECIAL PANELS 3' OR GREATER IN HEIGHT ARE REQUIRED, THEN 6" STRIPES SHALL BE USED.
2. IF FIXED PLACEMENT IS REQUIRED, MOUNT ON DELINEATOR POST. SEE COLORADO STANDARD PLAN S-612-1.



TYPICAL DRUM

1. THE 18" MINIMUM DIMENSION SHALL APPLY TO THE SMALLEST MEASUREMENT OF CIRCLING, RECTANGULAR, OR FLATTENED SIDE DRUMS.
2. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE HORIZONTAL, CIRCUMFERENTIAL, RETROREFLECTIVE STRIPES ON EACH DRUM.

GENERAL NOTES

1. THE VARIOUS TYPES, COMBINATIONS AND APPLICATIONS OF SIGNS AND WARNING LIGHTS FOR BARRICADES REQUIRED FOR EACH PROJECT SHALL BE:
   A. AS SPECIFIED OR DETAILED IN THE PLANS.
   B. AS SHOWN IN APPLICABLE TYPICAL ILLUSTRATIONS.
   C. AS CALLED FOR AND SUBJECT TO APPROVAL BY THE ENGINEER.
2. TEMPORARY AND PERMANENT TYPE 3 BARRICADES SHALL BE FABRICATED FROM APPROVED CRASH TESTED MATERIALS. SEE SECTION 614 AND 630 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ADDITIONAL REQUIREMENTS.
3. ALL PAINTING SHALL CONFORM WITH THE FOLLOWING:
   A. THE APPLICABLE SECTION OF 508 OF THE STANDARD SPECIFICATIONS.
   B. ALL SKIDS, BRACES AND POSTS SHALL BE PAINTED WITH 2 COATS OF EXTERIOR WHITE PAINT.
   C. THE BACKSIDES OF RAILS AND VERTICAL PANEL CHANNELIZING DEVICES FACING ONE DIRECTION OF TRAFFIC ONLY SHALL BE PAINTED WITH EXTERIOR WHITE PAINT.
   D. ALUMINUM OR GALVANIZED STEEL SKIDS, BRACES AND POSTS SHALL NOT BE PAINTED.
4. ALL STRIPED SURFACES SHALL CONFORM WITH THE FOLLOWING:
   A. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE FABRICATED AS ONE PIECE.
   B. HORIZONTAL RAILS, WING RAILS AND VERTICAL PANEL CHANNELIZING DEVICES SHALL HAVE ORANGE AND WHITE STRIPES ON THE FACE SIDE(S) SLANTING DOWNWARD AT A 45° ANGLE TOWARD THE SIDE(S) TO WHICH TRAFFIC IS TO PASS OR TURN.
   C. PERMANENT BARRICADES SHALL HAVE RETROREFLECTIVE RED AND WHITE STRIPES. THEY MAY BE USED AT LOCATIONS TO MARK THE END OF A ROAD, STREET OR HIGHWAY THAT ENDS AT A "T" INTERSECTION, OR WHERE THERE IS NO CROSSROAD OR OUTLET.
   D. ALL RETROREFLECTIVE SHEETING SHALL CONFORM TO ASTM D4956:
      1. ORANGE AND WHITE SHALL BE TYPE IV MINIMUM.
      2. RED AND WHITE SHALL BE TYPE IV MINIMUM.
5. FOR ALL WOODEN BARRICADE COMPONENTS NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY.
6. ALL SCREWS, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED OR CADMIUM PLATED.
7. STABILITY OF BARRICADES AND CHANNELIZING DEVICES SHALL CONFORM WITH THE FOLLOWING:
   A. SKIDS (BASES) OF MOVABLE BARRICADES SHALL BE WEIGHTED WITH SANDBAGS ONLY WHERE NECESSARY TO PROVIDE STABILITY.
   B. NO MOVABLE OR PORTABLE DEVICE SHALL BE WEIGHTED BY ANY METHOD OR WITH ANY MATERIAL THAT WOULD MAKE THEM HAZARDOUS TO MOTORISTS.
8. WARNING LIGHTS USED WITH BARRICADES, DRUMS AND VERTICAL PANELS SHALL CONFORM WITH THE FOLLOWING:
   A. USE FLASHING WARNING LIGHTS WHEN DEVICES ARE USED SINGLY, AND STEADY BURN LIGHTS WHEN THEY ARE USED IN A SERIES FOR CHANNELIZATION.
   B. THEY SHALL BE POSITIONED ABOVE THE TOP RAIL OF BARRICADES OR ON TOP OF DRUMS AND VERTICAL PANELS.
9. CONCRETE BARRIER (TEMPORARY) SHALL CONFORM WITH:
   A. PRECAST CONCRETE BARRIER AS SHOWN ON COLORADO STANDARD PLAN M-606-14.
   B. BARRIER REFLECTORS SHALL BE INSTALLED THAT MEET THE REQUIREMENTS OF STANDARD TYPICAL DELINEATOR INSTALLATIONS, EXCEPT THE MAXIMUM SPACING SHALL BE 50', AND THEY WILL NOT BE PAID FOR BUT ARE INCLUDED IN THE COST OF THE BARRIER.
   C. CONCRETE BARRIER END TREATMENT SHALL BE IN ACCORDANCE WITH CLEAR ZONE CRITERIA, AND PLACED AS SHOWN ON THE PLANS.
10. SIGN PANELS MOUNTED ON BARRICADES WILL BE PAID FOR SEPARATELY.

Computer File Information	
Creation Date: 07/04/12	
Created By: JSW	
Last Modification Date: 07/31/19	
Last Modified By: AVU	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
2829 W. Howard Pl.
Denver, CO 80204
Phone: 303-757-9436
FAX: 303-757-9219
Traffic & Safety Engineering MKB

BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) & VERTICAL PANELS

Issued By: Traffic & Safety Engineering Branch July 31, 2019

STANDARD PLAN NO.
S-630-2
Standard Sheet No. 1 of 1
Project Sheet Number:

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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NO.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

DETAIL SHEETS

SHEET 32 OF 32

JOB NO. 25174.00

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SOLACE APARTMENTS - SAND CREEK CENTER TRIBUTARY

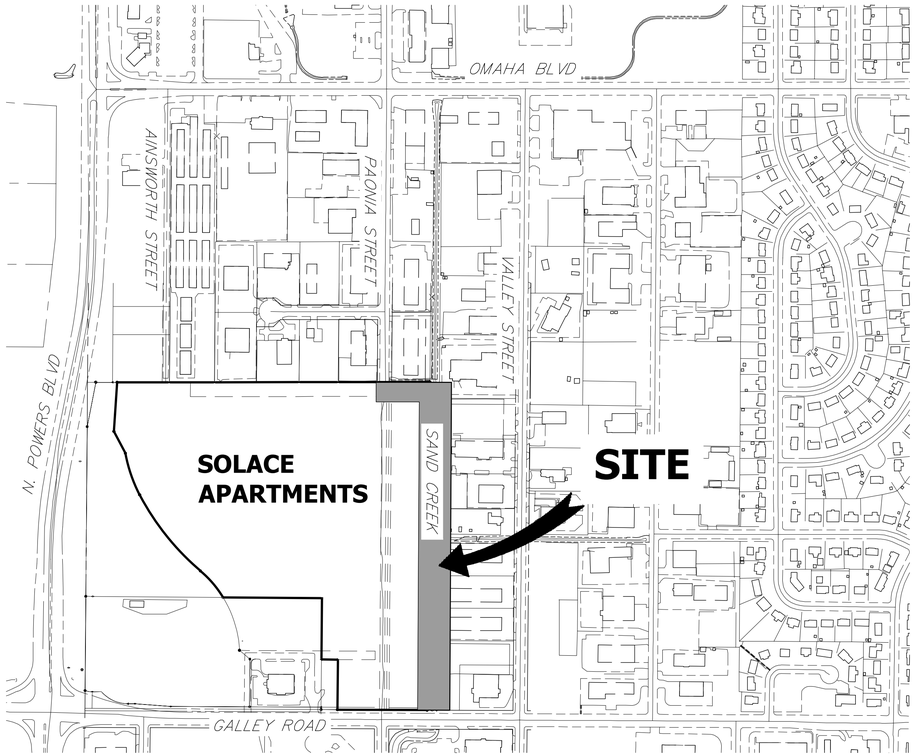
A PORTION OF SECTION 7, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M.

EL PASO COUNTY, COLORADO

CHANNEL IMPROVEMENTS

ABBREVIATIONS

AC	ACRE
AD	ALGEBRAIC DIFFERENCE
AH	AHEAD
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASSY	ASSEMBLY
AVE	AVENUE
BB	BOX BASE
BK	BACK
BNDY	BOUNDARY
BOP	BOTTOM OF PIPE
BOV	BLOW OFF VALVE
BFV	BUTTERFLY VALVE
BLVD	BOULEVARD
BW	BOTTOM OF WALL
C&G	CURB & GUTTER
CATV	CABLE TELEVISION
CB	CATCH BASIN
CBC	CONCRETE BOX CULVERT
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CDS	CUL-DE-SAC
CFS	CUBIC FEET PER SECOND
CL	CENTER LINE
CLOMR	CONDITIONAL LETTER OF MAP REVISION
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CR	CIRCLE
CSP	CORRUGATED STEEL PIPE
CT	COURT
CTRB	CONCRETE THRUST REDUCER BLOCK
CY	CUBIC YARD
DBPS	DRAINAGE BASIN PLANNING STUDY
DE	DRAINAGE EASEMENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRIVE
DRC	DESIGN REVIEW COMMITTEE
DU	DWELLING UNITS
E	EAST
EA	EACH
EGL	ENERGY GRADE LINE
EL	ELEVATION
ELEC	ELECTRIC
EOA	EDGE OF ASPHALT
ESMT	EASEMENT
EST	ESTIMATE
EX	EXISTING
FDP	FINAL DEVELOPMENT PLAN
FDR	FINAL DRAINAGE REPORT
FES	FLARED END SECTION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FIL	FILING
FO	FIBER OPTIC CABLE
GB	GRADE BREAK
GE	GAS EASEMENT
GIS	GEOGRAPHIC INFORMATION SYSTEM
GL	GAS LINE
GPS	GLOBAL POSITIONING SYSTEM
GV	GATE VALVE
HC	HANDICAP
HDC	HIGH DEFLECTION COUPLING
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HOA	HOME OWNERS ASSOCIATION
HP	HIGH POINT
I	INLET
IE	IRRIGATION EASEMENT
INT	INTERSECTION
INV	INVERT
IRR	IRRIGATION
KB	KICK (THRUST) BLOCK
LE	LANDSCAPE EASEMENT
LF	LINEAR FEET
LN	LANE
LOMR	LETTER OF MAP REVISION
LP	LOW POINT
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MDDP	MASTER DEVELOPMENT DRAINAGE PLAN
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NRCP	NON-REINFORCED CONCRETE PIPE
ODP	OFFICIAL DEVELOPMENT PLAN
OHE	OVERHEAD ELECTRIC
OHU	OVERHEAD UTILITY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	POINT OF CURB RETURN
PDP	PRELIMINARY DEVELOPMENT PLAN
PE	PROFESSIONAL ENGINEER
PI	POINT OF INTERSECTION
PKWY	PARKWAY
PL	PROPERTY LINE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
ROW	RIGHT OF WAY
RT	RIGHT
S	SOUTH
STE	STEEL
SAN	SANITARY SEWER
SF	SQUARE FEET
ST	STREET
STA	STATION
STM	STORM SEWER
SY	SQUARE YARD
SY-IN	SQUARE YARD INCH
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TBW	TOP BACK OF WALK
TEL	TELEPHONE
TOA	TOP OF ASPHALT
TOB	TOP OF BOX
TOC	TOP OF CURB OR CONCRETE
TOF	TOP OF FOUNDATION
TOP	TOP OF PIPE
TW	TOP OF WALL
TYP	TYPICAL
UDFCD	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
UE	UTILITY EASEMENT
U&DE	UTILITY & DRAINAGE EASEMENT
UGE	UNDERGROUND ELECTRIC
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTC	VEHICLE TRACKING CONTROL
W	WEST
WL	WATER LINE
WM	WATER MAIN
WRD	WATER RESOURCES DEPARTMENT
WS	WATER SURFACE
WSE	WATER SURFACE ELEVATION
WTR	WATER
YR	YEAR



VICINITY MAP
SCALE: 1" = 300'

SHEET INDEX

1	COVER SHEET
2	GENERAL NOTES
3	SITE AND DEMO PLAN
4–6	CHANNEL PLAN AND PROFILES
7	CHANNEL DETAILS
8	DROP STRUCTURES PLAN AND PROFILE
9	DROP STRUCTURE DETAIL SHEETS
10	PAONIA STREET OVERFLOW PLAN
TOTAL	10

BASIS OF BEARINGS

BENCHMARK

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

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J·R ENGINEERING

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GEOTECHNICAL ENGINEER

CTL THOMPSON, INC
5170 MARK DABLING BLVD
COLORADO SPRINGS, CO 80918
P~719.528.8300

CTL|THOMPSON INCORPORATED

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

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

DANE OLMSTEAD — DATE

JACKSON DEARBORN PARTNERS
404 S. WELLS ST. SUITE 400
CHICAGO, IL 60607

EL PASO COUNTY STATEMENT

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 COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

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 DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
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SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1" = 300'
V-SCALE	N/A
DATE	11/16/20
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

SAND CREEK CENTER TRIBUTARY
COVER SHEET

SHEET 1 OF 10
JOB NO. 25174.00

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
FENCE		
GUARDRAIL		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
TOP OF SLOPE		
TOE OF SLOPE		
100 YEAR FLOODPLAIN	100YR	100YR
5 YEAR HGL		
100 YEAR HGL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
AIR & VACUUM VALVE ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (ALTERNATE 7)	
NAIL & WASHER – FOUND	NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

DRAINAGE REPORT PLANS

KEY

BASIN DESIGNATION (NO COEFFICIENT)	# / #.##
BASIN DESIGNATION (1 COEFFICIENT)	# / #.## / #
BASIN DESIGNATION (2 COEFFICIENTS)	# / #.## / # / #
ANALISYS POINT IDENTIFIER	#
BASIN DESIGNATION (HISTORIC)	# / #.##
BASIN DESIGNATION (DEVELOPED)	# / #.##
SUB–BASIN DESIGNATION (DEVELOPED)	# / #.##
DRAINAGE PIPE IDENTIFIER	##
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	##
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	?
SWMM DESIGNATION 1	#
SWMM DESIGNATION 2	#
SWMM DESIGNATION 3	#
SWMM DESIGNATION 4	?

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
   3.4. CDOT M&S STANDARDS

4. 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 VERSIONS OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE EINGEERI9NG CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER–THE–FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS–ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PLANNING AND COMMUNITY DEVELOPMENT.

10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT–OF–WAY AND SPECIAL TRANSPORT PERMITS.

15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF–SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

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

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
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SUITE 400
CHICAGO, ILL 60607
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Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

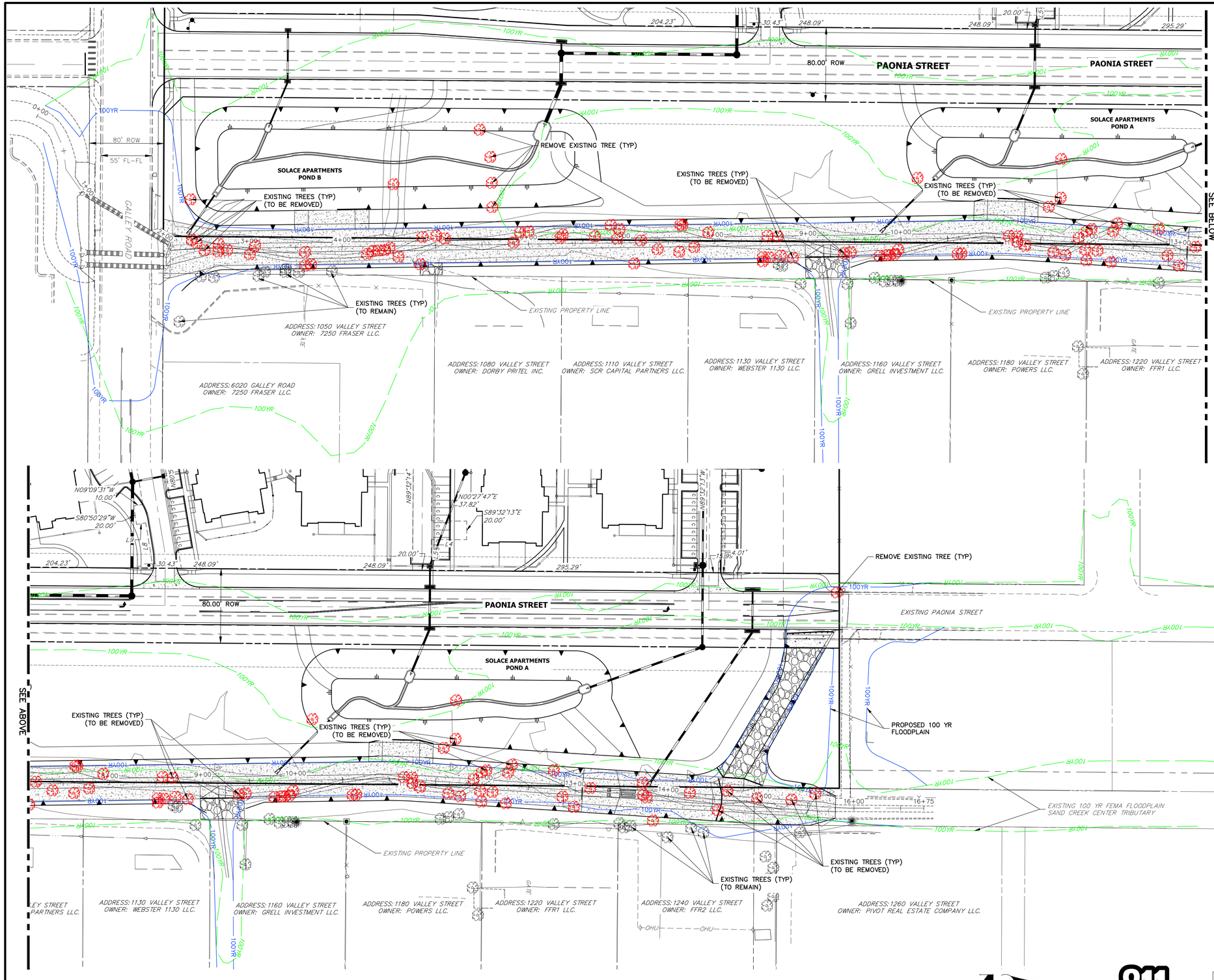
H–SCALE	N/A
V–SCALE	N/A
DATE	11/16/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

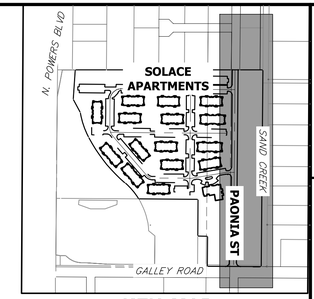
SAND CREEK CENTER TRIBUTARY

GENERAL NOTES

SHEET 2 OF 10

JOB NO. 25174.00





KEY MAP
SCALE 1"=500'

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

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

ENGINEER'S STATEMENT

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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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No.	REVISION	BY	DATE

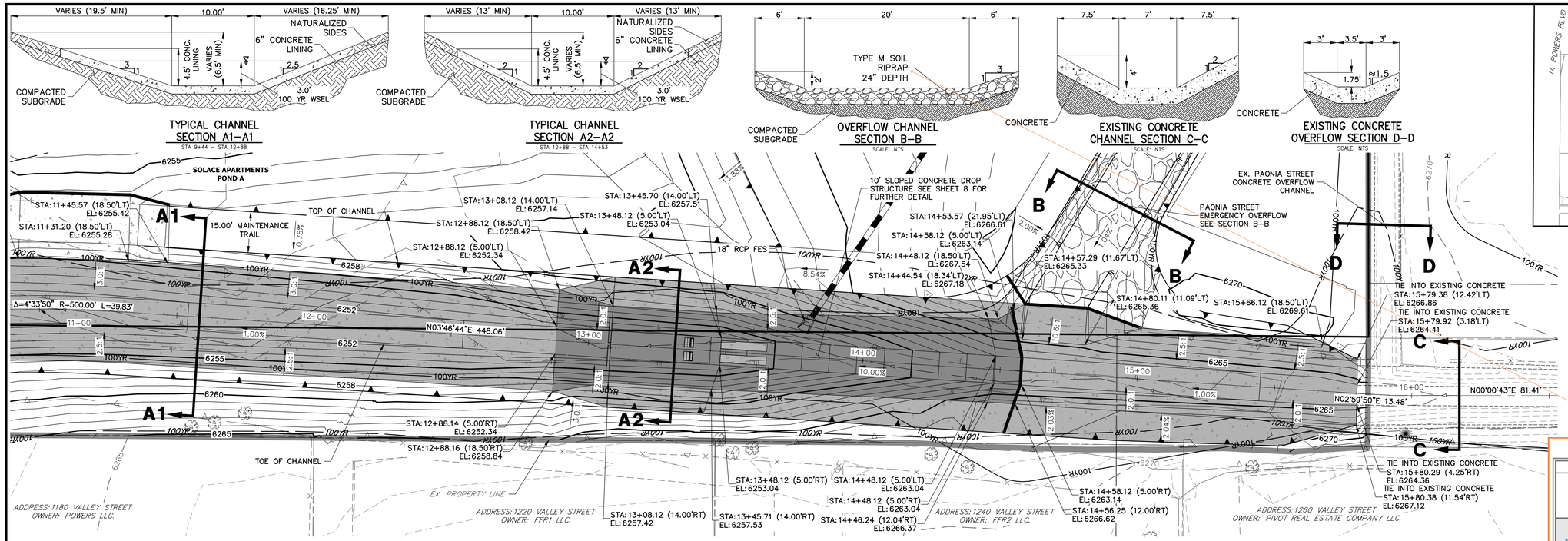
H-SCALE	1"=50'
V-SCALE	N/A
DATE	11/16/20
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

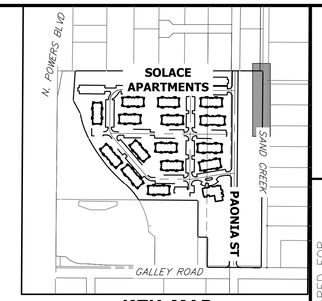
SAND CREEK CENTER TRIBUTARY

SITE AND DEMO PLAN

SHEET 3 OF 10

JOB NO. 25174.00





KEY MAP
SCALE 1"=500'

Provide riprap gradation table and note that CDOT Section 506 Requirements apply

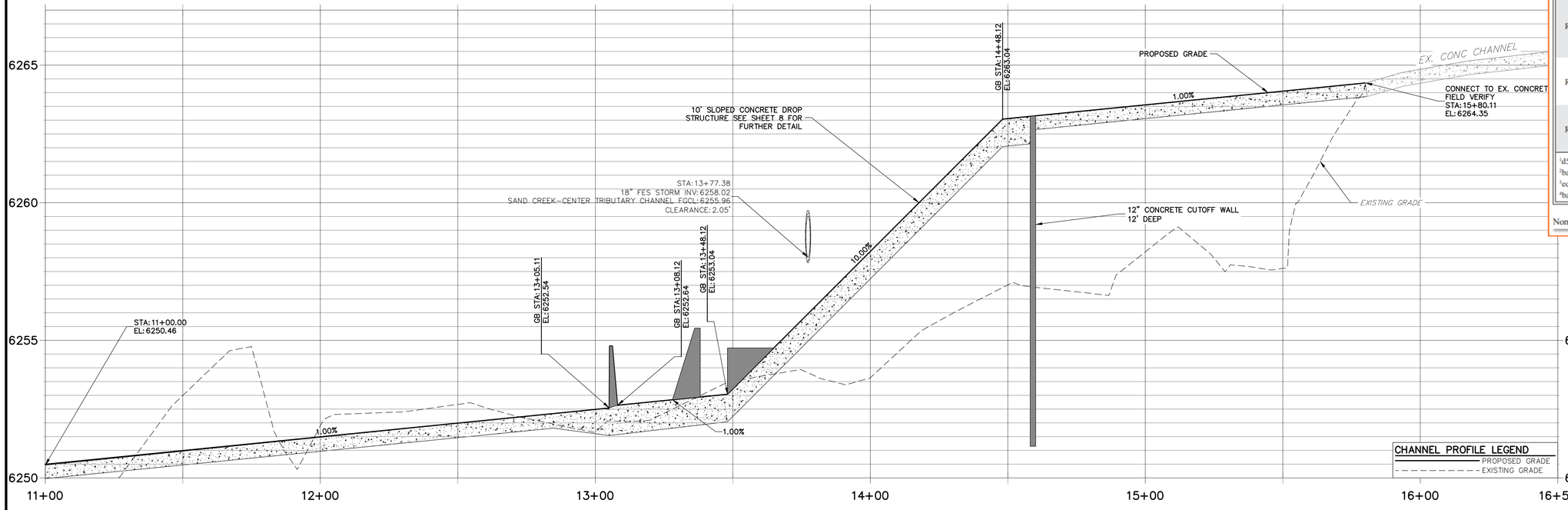
Table 506-2

Pay Item				
	Stone Size d50[1] (Inches)	Percent of Material Smaller Than Typical Stone[2]	Typical Stone Dimensions[3] (Inches)	Typical Stone Weight[4] (Pounds)
Riprap	6	70-100	12	85
		50-70	9	35
		35-50	6	10
		2-10	2	0.4
Riprap	9	70-100	15	160
		50-70	12	85
		35-50	9	35
		2-10	3	1.3
Riprap	12	70-100	21	440
		50-70	18	275
		35-50	12	85
		2-10	4	3
Riprap	18	100	30	1280
		50-70	24	650
		35-50	18	275
		2-10	6	10
Riprap	24	100	42	3500
		50-70	33	1700
		35-50	24	650
		2-10	9	35

[1]d50 = nominal stone size
[2]based on typical rock mass
[3]equivalent spherical diameter
[4]based on a specific gravity = 2.5

Nominal stone size and total thickness of the riprap shall be as shown on the plans.

SAND CREEK-CENTER TRIBUTARY CHANNEL PROFILE (4)
STA 11+00.00 TO 16+50.00



HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

LEGEND

PROPOSED MAJOR CONTOURS 6100
EXISTING MAJOR CONTOUR 6100
LIMITS OF GRADING
6" THICK CONCRETE CHANNEL LINING
12" THICK CONCRETE CHANNEL LINING

ENGINEER'S STATEMENT

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COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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(734) 216-2577

ENGINEERING
company
Colorado Springs 719-593-2593
www.jrengineering.com

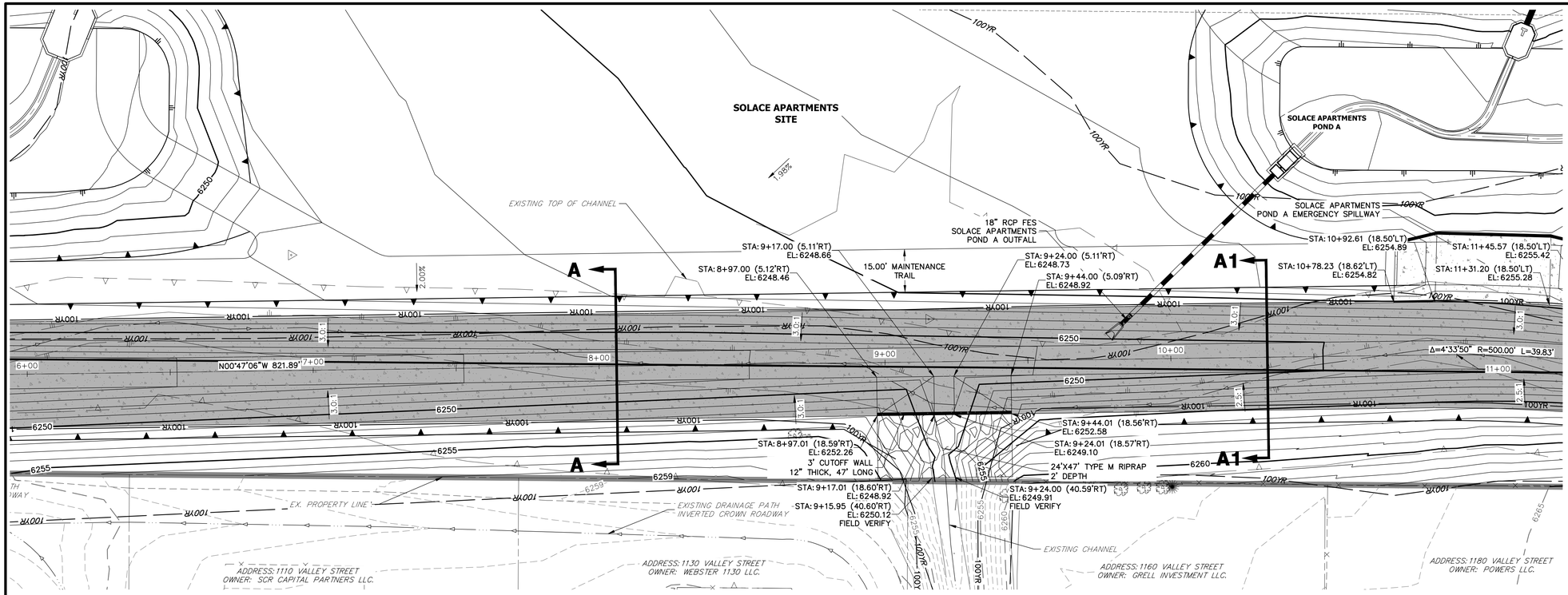
H-SCALE	1"=20'
V-SCALE	1"=2'
DATE	11/16/2
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

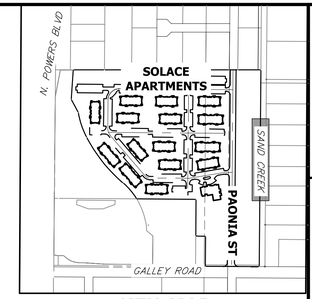
SAND CREEK CENTER TRIBUTARY
CHANNEL PLAN AND PROFILES

SHEET 4 OF 10

JOB NO. 25174.00

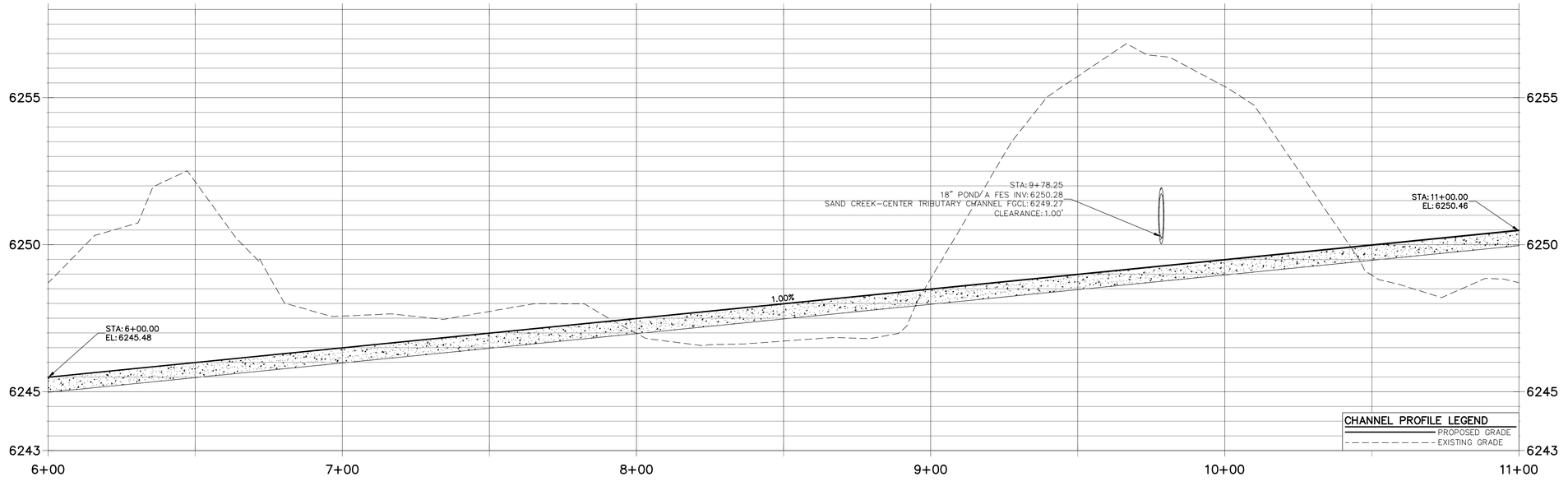
Know what's below. Call before you dig.

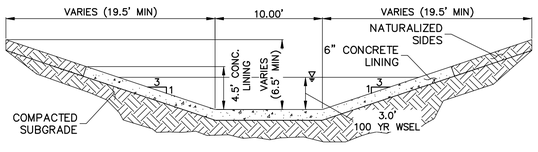




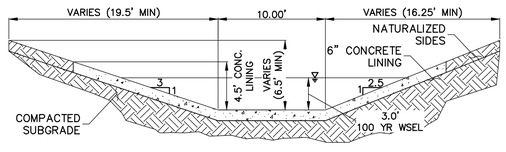
KEY MAP
SCALE 1"=500'

SAND CREEK-CENTER TRIBUTARY CHANNEL PROFILE (3)
STA 6+00.00 TO 11+00.00

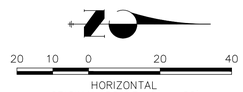




TYPICAL CHANNEL SECTION A–A
STA 5+50 – STA 9+44



TYPICAL CHANNEL SECTION A1–A1
STA 9+44 – STA 12+88



HORIZONTAL ORIGINAL SCALE: 1" = 20'
VERTICAL ORIGINAL SCALE: 1" = 2'

LEGEND

- PROPOSED MAJOR CONTOURS 6100
- EXISTING MAJOR CONTOUR 6100
- LIMITS OF GRADING
- 6" THICK CONCRETE CHANNEL LINING
- 12" THICK CONCRETE CHANNEL LINING

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ENGINEER'S STATEMENT

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No.	REVISION	BY	DATE

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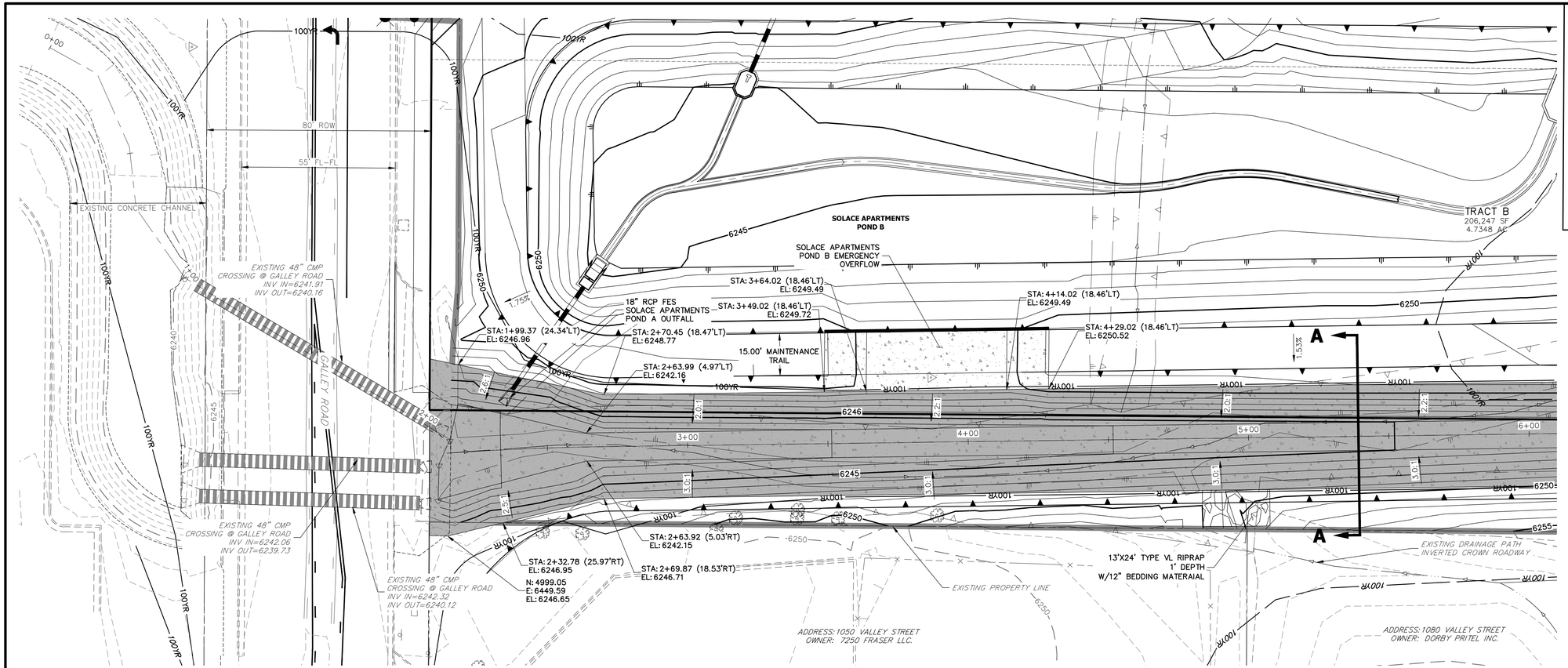
V-SCALE	1"=2'
DATE	11/16/20
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

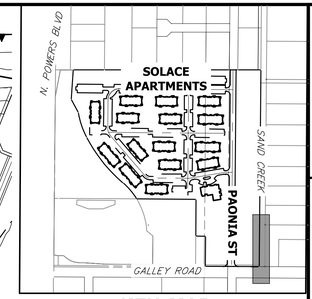
SAND CREEK CENTER TRIBUTARY

CHANNEL PLAN AND PROFILES

SHEET 5 OF 10

JOB NO. 25174.00





KEY MAP
SCALE 1"=500'

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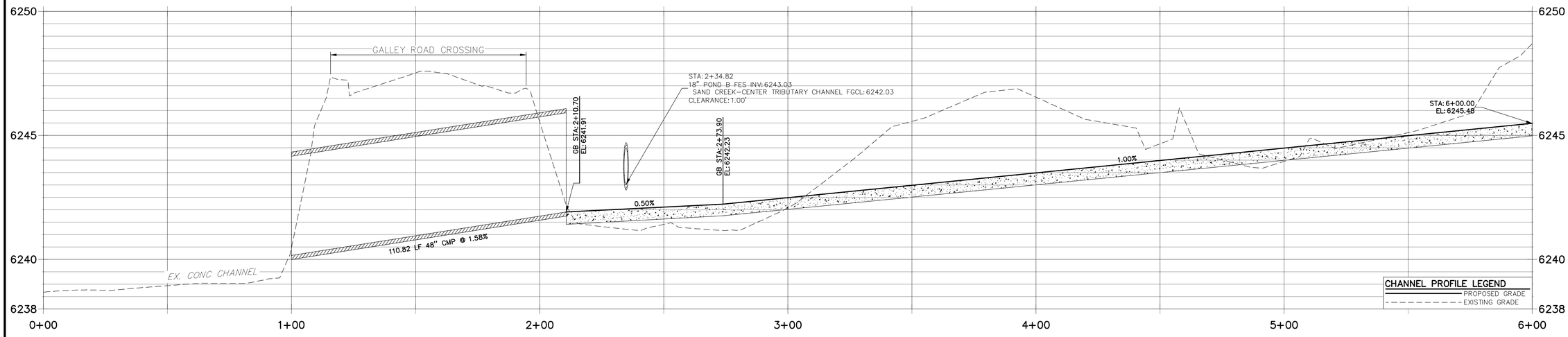
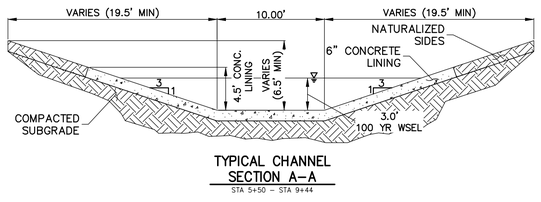
SAND CREEK-CENTER TRIBUTARY CHANNEL PROFILE
STA 0+00.00 TO 6+00.00





TYPICAL CHANNEL SECTION A-A
STA 5+50 - STA 9+44

LEGEND

PROPOSED MAJOR CONTOURS 6100
EXISTING MAJOR CONTOUR 6100
LIMITS OF GRADING
6" THICK CONCRETE CHANNEL LINING
12" THICK CONCRETE CHANNEL LINING

20 10 0 20 40
HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

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

ENGINEER'S STATEMENT
STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E. 32314
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

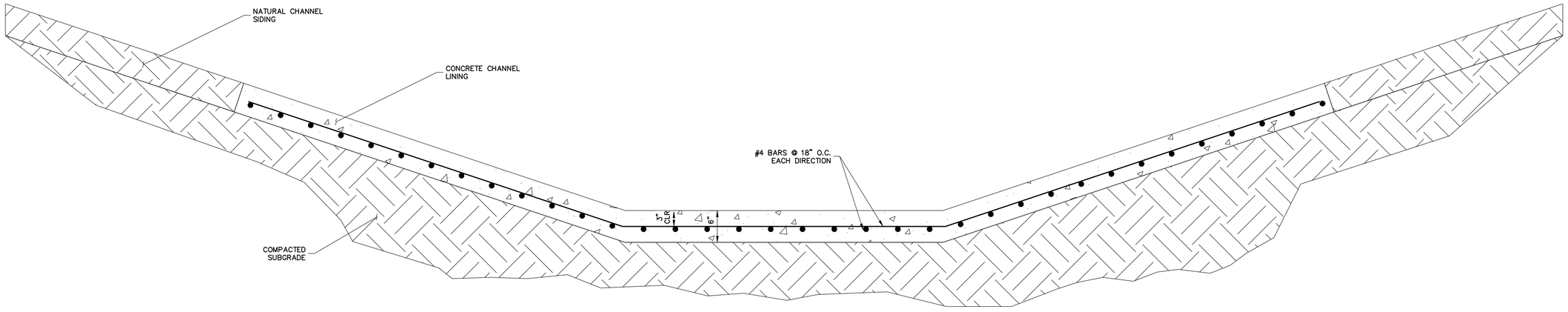
DATE

No.	REVISION	BY	DATE

H-SCALE	1"=20'
V-SCALE	1"=2'
DATE	11/16/20
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

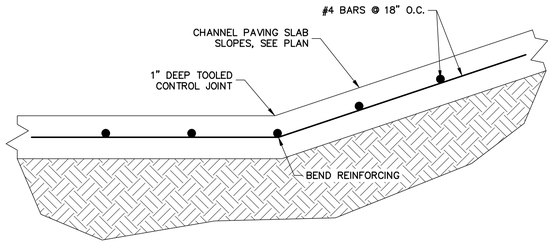
SAND CREEK CENTER TRIBUTARY
CHANNEL PLAN AND PROFILES

SHEET 6 OF 10
JOB NO. 25174.00



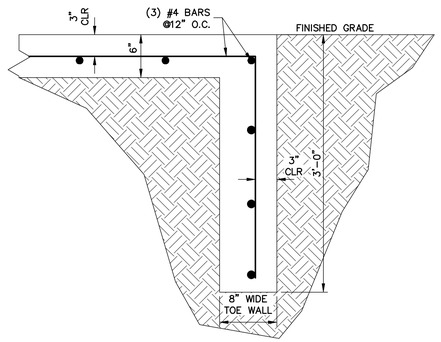
TYPICAL CONCRETE CHANNEL SECTION

SCALE: N.T.S.



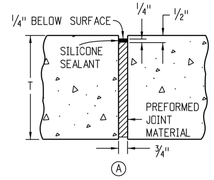
SLOPE CHANGE AT CHANNEL PAVING SLAB

SCALE: N.T.S.

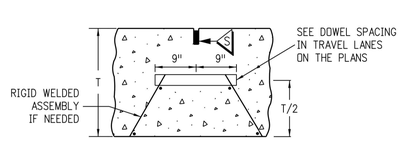


CUTOFF/APRON TOE WALL @ TIE INTO EXISTING

SCALE: N.T.S.

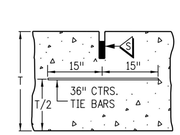


EXPANSION JOINT



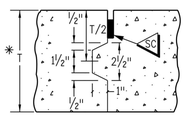
DOWELED TRANSVERSE CONSTRUCTION OR CONTRACTION JOINT

(TRANSVERSE WEAKENED PLANE JOINT)



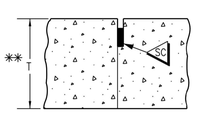
LONGITUDINAL CONTRACTION JOINT

(LONGITUDINAL WEAKENED PLANE JOINT)



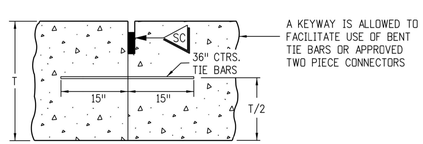
LONGITUDINAL CONSTRUCTION JOINT

* USE ONLY IF T ≥ 8 IN. FORM ONLY FEMALE KEYWAY

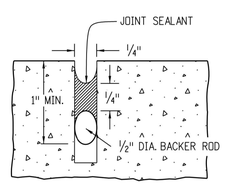


LONGITUDINAL CONSTRUCTION JOINT

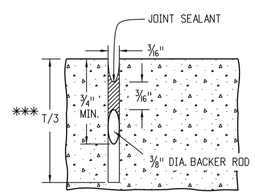
** USE ONLY IF T < 8 IN.



LONGITUDINAL CONSTRUCTION JOINT



SEAL AT CONSTRUCTION JOINT



SAWED JOINT

*** USE T/4 WHEN T < 8 IN.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	JBP
V-SCALE	N/A	DRAWN BY	JBP
DATE	11/16/20	CHECKED BY	

SAND CREEK CENTER
TRIBUTARY

CHANNEL DETAILS

SHEET 7 OF 10

JOB NO. 25174.00

PAONIA STREET IMPROVEMENTS

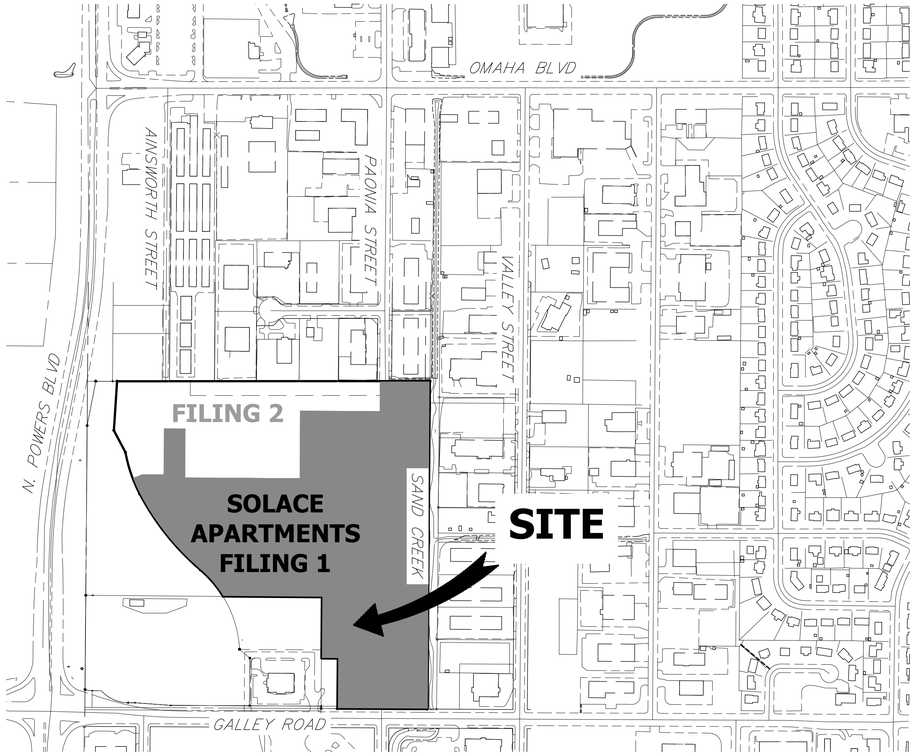
A PORTION OF SECTION 7, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M.

EL PASO COUNTY, COLORADO

PAONIA STREET IMPROVEMENTS

ABBREVIATIONS

AC	ACRE
AD	ALGEBRAIC DIFFERENCE
AH	AHEAD
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASSY	ASSEMBLY
AVE	AVENUE
BB	BOX BASE
BK	BACK
BNDY	BOUNDARY
BOP	BOTTOM OF PIPE
BOV	BLOW OFF VALVE
BFV	BUTTERFLY VALVE
BLVD	BOULEVARD
BW	BOTTOM OF WALL
C&G	CURB & GUTTER
CATV	CABLE TELEVISION
CB	CATCH BASIN
CBC	CONCRETE BOX CULVERT
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CDS	CUL-DE-SAC
CFS	CUBIC FEET PER SECOND
CL	CENTER LINE
CLOMR	CONDITIONAL LETTER OF MAP REVISION
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CR	CIRCLE
CSP	CORRUGATED STEEL PIPE
CT	COURT
CTRB	CONCRETE THRUST REDUCER BLOCK
CY	CUBIC YARD
DBPS	DRAINAGE BASIN PLANNING STUDY
DE	DRAINAGE EASEMENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRIVE
DRC	DESIGN REVIEW COMMITTEE
DU	DWELLING UNITS
E	EAST
EA	EACH
EGL	ENERGY GRADE LINE
EL	ELEVATION
ELEC	ELECTRIC
EOA	EDGE OF ASPHALT
ESMT	EASEMENT
EST	ESTIMATE
EX	EXISTING
FDP	FINAL DEVELOPMENT PLAN
FDR	FINAL DRAINAGE REPORT
FES	FLARED END SECTION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FIL	FILING
FO	FIBER OPTIC CABLE
GB	GRADE BREAK
GE	GAS EASEMENT
GIS	GEOGRAPHIC INFORMATION SYSTEM
GL	GAS LINE
GPS	GLOBAL POSITIONING SYSTEM
GV	GATE VALVE
HC	HANDICAP
HDC	HIGH DEFLECTION COUPLING
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HOA	HOME OWNERS ASSOCIATION
HP	HIGH POINT
I	INLET
IE	IRRIGATION EASEMENT
INT	INTERSECTION
INV	INVERT
IRR	IRRIGATION
KB	KICK (THRUST) BLOCK
LE	LANDSCAPE EASEMENT
LF	LINEAR FEET
LN	LANE
LOMR	LETTER OF MAP REVISION
LP	LOW POINT
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MDDP	MASTER DEVELOPMENT DRAINAGE PLAN
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NRCP	NON-REINFORCED CONCRETE PIPE
ODP	OFFICIAL DEVELOPMENT PLAN
OHE	OVERHEAD ELECTRIC
OHU	OVERHEAD UTILITY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	POINT OF CURB RETURN
PDP	PRELIMINARY DEVELOPMENT PLAN
PE	PROFESSIONAL ENGINEER
PI	POINT OF INTERSECTION
PKWY	PARKWAY
PL	PROPERTY LINE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
ROW	RIGHT OF WAY
RT	RIGHT
S	SOUTH
STE	STEEL
SAN	SANITARY SEWER
SF	SQUARE FEET
ST	STREET
STA	STATION
STM	STORM SEWER
SY	SQUARE YARD
SY-IN	SQUARE YARD INCH
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TBW	TOP BACK OF WALK
TEL	TELEPHONE
TOA	TOP OF ASPHALT
TOB	TOP OF BOX
TOC	TOP OF CURB OR CONCRETE
TOF	TOP OF FOUNDATION
TOP	TOP OF PIPE
TW	TOP OF WALL
TYP	TYPICAL
UDFCD	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
UE	UTILITY EASEMENT
U&DE	UTILITY & DRAINAGE EASEMENT
UGE	UNDERGROUND ELECTRIC
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTC	VEHICLE TRACKING CONTROL
W	WEST
WL	WATER LINE
WM	WATER MAIN
WRD	WATER RESOURCES DEPARTMENT
WS	WATER SURFACE
WSE	WATER SURFACE ELEVATION
WTR	WATER
YR	YEAR



VICINITY MAP
SCALE: 1" = 300'

SHEET INDEX

1	COVER SHEET
2	LEGEND & NOTES
3	TYPICAL SECTIONS
4	OVERALL UTILITY PLAN
5-7	ROADWAY PLAN AND PROFILE
8	SIGNAGE AND STRIPING PLAN
9	DETAILS
TOTAL	9

APPLICANT/OWNER

JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, IL 60607
P~734.216.2577

CIVIL ENGINEER

JR ENGINEERING
5475 TECH CENTER DR
SUITE 235
COLORADO SPRINGS, CO 80919
CONTACT: MIKE BRAMLETT
C~719.659.7679

PLANNER

N.E.S. INC.
619 N. CASCADE AVE
SUITE 200
COLORADO SPRINGS, CO 80903
CONTACT: TAMARA BAXTER
P~719.471.0073

ARCHITECT

LCM ARCHITECTS
819 S. WABASH AVE, FIFTH FLOOR
CHICAGO, IL 60605
P~312.995.5305

GEOTECHNICAL ENGINEER

CTL THOMPSON, INC
5170 MARK DABLING BLVD
COLORADO SPRINGS, CO 80918
P~719.528.8300

J·R ENGINEERING

CTL|THOMPSON INCORPORATED

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
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Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1" = 300'
V-SCALE	N/A
DATE	11/25/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

PAONIA STREET IMPROVEMENTS
COVER SHEET

SHEET 1 OF 9
JOB NO. 25174.00

X:\2510000.all\25174XX\Drawings\Sheet Dwgs\Paonia Street Improvements\25174XXCV01.dwg, CV01, 11/24/2020 3:47:39 PM, CS

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
FENCE		
GUARDRAIL		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
TOP OF SLOPE		
TOE OF SLOPE		
100 YEAR FLOODPLAIN	100YR	100YR
5 YEAR HGL		
100 YEAR HGL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE	Ⓓ	◉
STORM INLET		▣
AREA INLET – SQUARE	□	
FLARED END SECTION	▷	◁
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER	Ⓢ	
CLEAN–OUT	o–	•–
MANHOLE W/ DIRECTIONAL FLOW ARROW	Ⓢ	•◀
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER	Ⓦ	
FIRE HYDRANT		
MANHOLE	Ⓦ	•
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER	Ⓜ	●
VALVE	⋈	⋈
REDUCER		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
AIR & VACUUM VALVE ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER	Ⓖ	
METER	Ⓖ	
VALVE	⋈	
PLUG	[	
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER	Ⓔ	
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE	–o–	
GUY ANCHOR	o–	
GUY POLE	o–	

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	•AC
BRASS CAP – FOUND	•BC
BENCHMARK – FOUND	
CROSS – FOUND	+
MONUMENT – SET	○
MONUMENT – FOUND (DEFAULT)	●
MONUMENT – FOUND (ALTERNATE 1)	■
MONUMENT – FOUND (ALTERNATE 2)	◉
MONUMENT – FOUND (ALTERNATE 3)	▲
MONUMENT – FOUND (ALTERNATE 4)	◭
MONUMENT – FOUND (ALTERNATE 5)	⬟
MONUMENT – FOUND (ALTERNATE 6)	◉
MONUMENT – FOUND (ALTERNATE 7)	◬
NAIL & WASHER – FOUND	•NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	•PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	⊡
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

DRAINAGE REPORT PLANS

KEY

BASIN DESIGNATION (NO COEFFICIENT)	# / #.##
BASIN DESIGNATION (1 COEFFICIENT)	# / #.## / #
BASIN DESIGNATION (2 COEFFICIENTS)	# / #.## / # / #
ANALISYS POINT IDENTIFIER	#
BASIN DESIGNATION (HISTORIC)	# / #.##
BASIN DESIGNATION (DEVELOPED)	# / #.##
SUB–BASIN DESIGNATION (DEVELOPED)	# / #.##
DRAINAGE PIPE IDENTIFIER	##
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	##
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	?
SWMM DESIGNATION 1	#
SWMM DESIGNATION 2	#
SWMM DESIGNATION 3	#
SWMM DESIGNATION 4	?

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
   3.4. CDOT M&S STANDARDS

4. 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 VERSIONS OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE EINGEERI9NG CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER–THE–FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS–ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PLANNING AND COMMUNITY DEVELOPMENT.

10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT–OF–WAY AND SPECIAL TRANSPORT PERMITS.

15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF–SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

SIGNING AND STRIPING NOTES

1. ALL SIGNS AND PAVEMENT MARKING SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.

3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.

4. ALL SIGNS SHO9WN ON THE SIGNING AND STRIPING PLANN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.

5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.

6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.

7. ALL STREET NAME SIGNS SHALL BE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER–LOWER CASE LETTERING ON 8" BLANK AND NON–LOCAL ROADWAY SIGNS BEING 6" LETTERING. UPPER–LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI–LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER–LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON–RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".

8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.

9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE,. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S–614–8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.

10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" THICKNESS.

11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S–627–1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE, STOP BARS SHALL BE 24" IN WIDTH, CROSSWALK LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S–267–1.

12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON–LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S–627–1.

13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520–6819 PRIOR TO AND UPON COMPLETION OF THE SIGNING AND STRIPING.

14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216–2577

J·R ENGINEERING
A Westrian Company
Centennial 303–740–9393 • Colorado Springs 719–593–2593
Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	11/25/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

PAONIA STREET IMPROVEMENTS

LEGEND & NOTES

SHEET 2 OF 9

JOB NO. 25174.00

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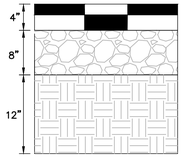


ASPHALT IN FOLLOWING LIFTS:

2.0" HMA (GRADING SX) (75) (PG 64-22
2.0" HMA (GRADING S) (75) (PG 64-22)

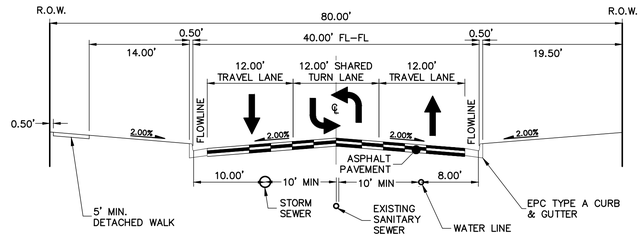
8" AGGREGATE BASE COURSE (CLASS 6)

12" MOISTURE TREATED SUBGRADE, COMPACTED TO AT LEAST 95% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY (ASTM D 1557, AASHTO T 180)

PROPOSED ROADWAY PAVEMENT SECTION

N.T.S.

FINAL PAVEMENT SECTION SHALL BE PER GEOTECHNICAL RECOMMENDATIONS WITHIN THE APPROVED PAVEMENT DESIGN REPORT.

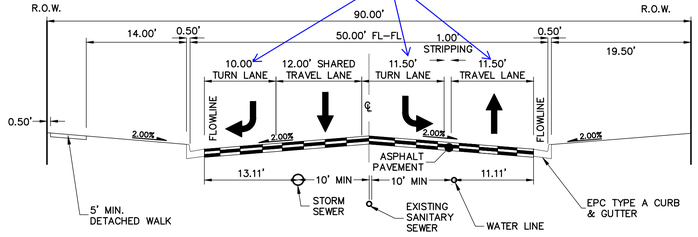


PAONIA ST TYPICAL SECTION (80' ROW)

N.T.S.

JR- Lane width dimensions have been updated for this section.

Per ECM criteria the min. lane width is 12'. A deviation request with justification for review and decision by the ECM administrator would be required for reduced lane widths.



PAONIA ST TYPICAL SECTION (90' ROW)

N.T.S.

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CHECKED BY	

PAONIA STREET IMPROVEMENTS

TYPICAL SECTIONS

SHEET 3 OF 9

JOB NO. 25174.00

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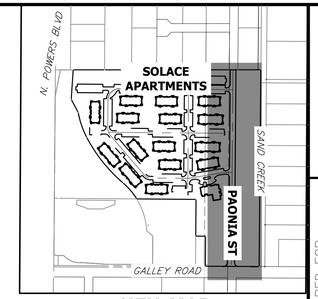
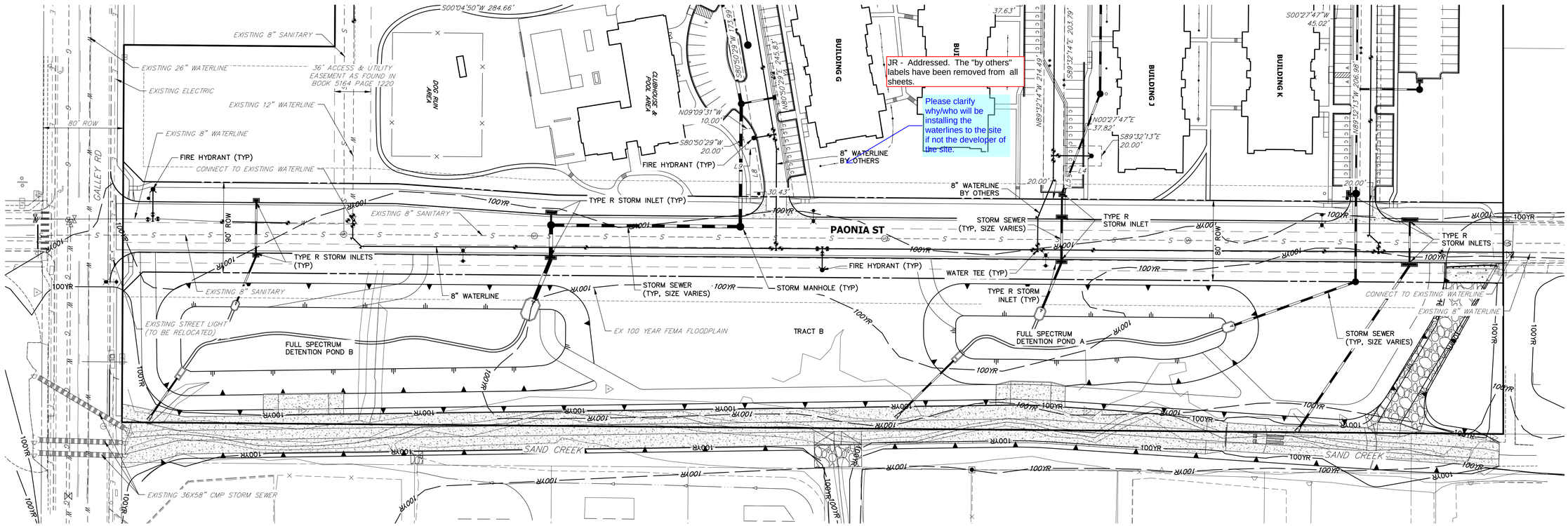


KEY MAP
SCALE 1"=500'



JR - Addressed. The "by others" labels have been removed from all sheets.

Please clarify why/who will be installing the waterlines to the site if not the developer of the site.

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

NOTES

1. SEE SHEET 3 FOR TYPICAL SECTIONS.

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

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V-SCALE	N/A	DRAWN BY	JRM
DATE	11/25/20	CHECKED BY	

PAONIA STREET IMPROVEMENTS
OVERALL UTILITY PLAN

SHEET 4 OF 9

JOB NO. 25174.00

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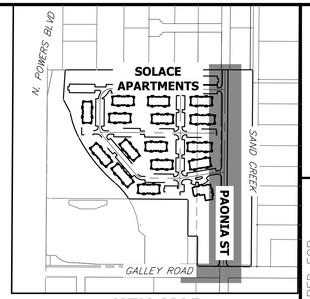
NOTES

1. ALL PROFILE ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
2. ALL POINT TABULATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.
3. SEE SHEET 2 FOR LEGEND.
4. SEE SHEETS 3 FOR TYPICAL STREET SECTIONS.
5. SIDEWALK SHALL BE A DEPTH OF 6 INCHES.

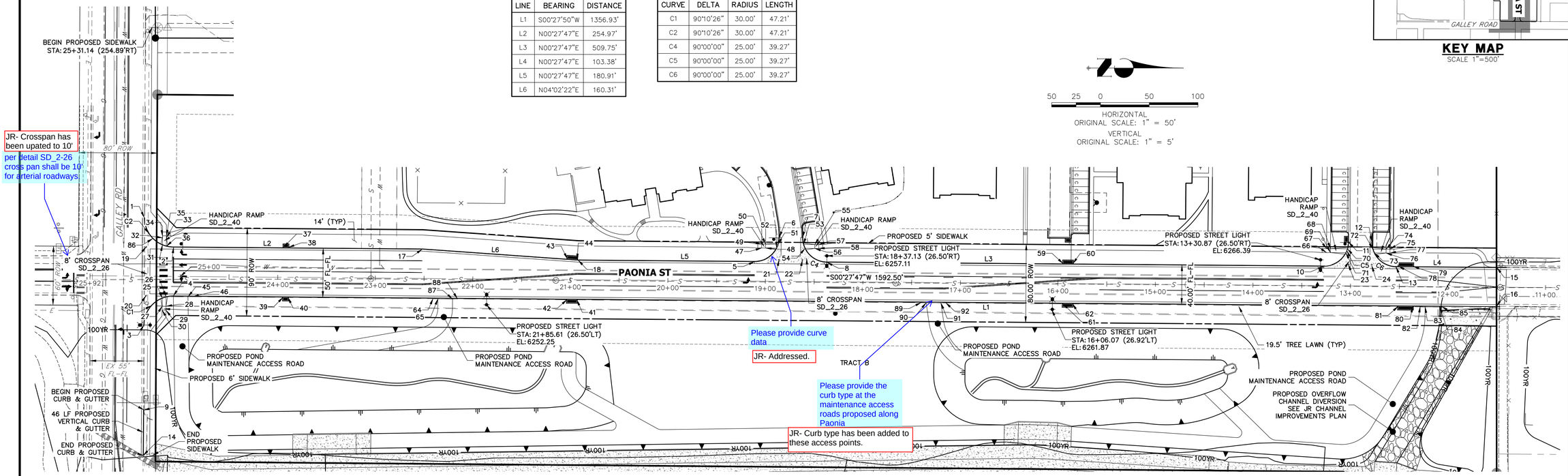
LINE TABLE		
LINE	BEARING	DISTANCE
L1	S00°27'50"W	1356.93'
L2	N00°27'47"E	254.97'
L3	N00°27'47"E	509.75'
L4	N00°27'47"E	103.38'
L5	N00°27'47"E	180.91'
L6	N04°02'22"E	160.31'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	90°10'26"	30.00'	47.21'
C2	90°10'26"	30.00'	47.21'
C4	90°00'00"	25.00'	39.27'
C5	90°00'00"	25.00'	39.27'
C6	90°00'00"	25.00'	39.27'

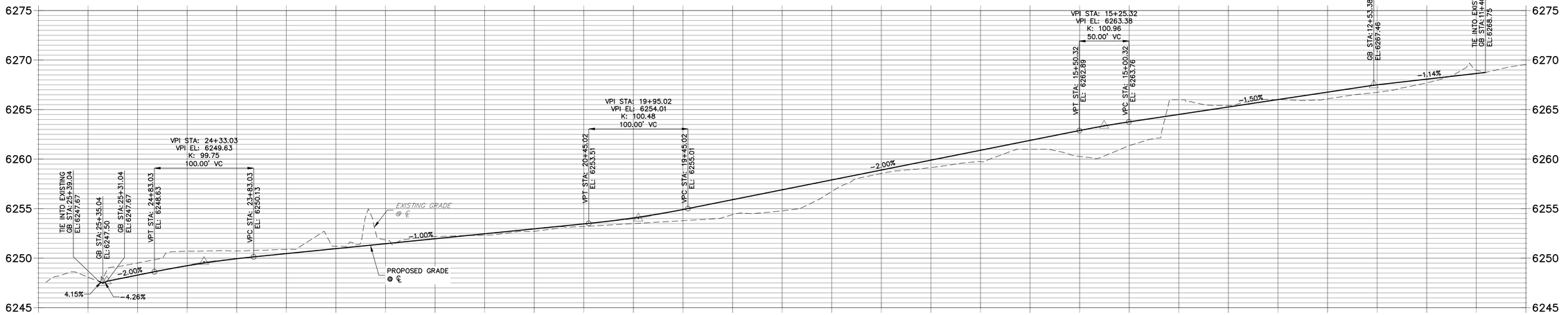


KEY MAP
SCALE 1"=500'

50 25 0 50 100
HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'



PAONIA ST CL PROFILE
STA 11+00.00 TO 26+00.00



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PAONIA STREET IMPROVEMENTS
ROADWAY PLAN AND PROFILE

SHEET 5 OF 9
JOB NO. 25174.00

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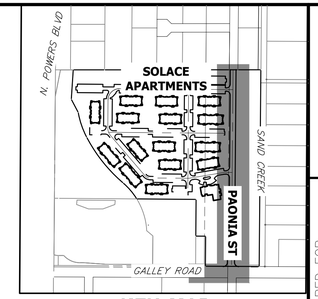

KEY MAP
SCALE 1"=500'

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3. SEE SHEET 2 FOR LEGEND.
4. SEE SHEETS 3 FOR TYPICAL STREET SECTIONS.
5. SIDEWALK SHALL BE A DEPTH OF 6 INCHES.

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
1	25+37.28	59.91' (RT)	PAONIA ST CL	6247.81	TIE INTO EXISTING
2	25+07.01	30.00' (RT)	PAONIA ST CL	6247.96	PCR
3	25+36.89	50.09' (LT)	PAONIA ST CL	6247.33	TIE INTO EXISTING
4	25+06.89	20.00' (LT)	PAONIA ST CL	6247.71	PCR
5	19+11.15	20.00' (RT)	PAONIA ST CL	6255.16	PCR
6	18+86.15	45.00' (RT)	PAONIA ST CL	6256.06	PCC
7	18+62.15	45.00' (RT)	PAONIA ST CL	6256.15	PCC
8	18+37.15	20.00' (RT)	PAONIA ST CL	6256.64	PCR
9	25+36.56	137.22' (LT)	PAONIA ST CL	6246.81	BEGIN C&G
10	13+27.39	20.00' (RT)	PAONIA ST CL	6265.83	PCR
11	13+02.39	45.00' (RT)	PAONIA ST CL	6266.38	PCR
12	12+78.38	45.00' (RT)	PAONIA ST CL	6266.99	PCR
13	12+53.39	20.00' (RT)	PAONIA ST CL	6266.94	PCR
14	25+36.49	183.62' (LT)	PAONIA ST CL	6246.72	END C&G
15	11+50.00	20.00' (RT)	PAONIA ST CL	6269.53	TIE INTO EXISTING
16	11+50.00	20.00' (LT)	PAONIA ST CL	6268.22	TIE INTO EXISTING
17	22+52.04	30.00' (RT)	PAONIA ST CL	6250.71	PI
18	20+92.04	20.00' (RT)	PAONIA ST CL	6252.51	PI
19	25+35.14	30.00' (RT)	PAONIA ST CL	6247.62	FL–FL INTERCEPT
20	25+34.98	20.00' (LT)	PAONIA ST CL	6247.45	FL–FL INTERCEPT
21	18+86.13	22.00' (RT)	PAONIA ST CL	6255.46	FL–FL INTERCEPT
22	18+62.13	22.00' (RT)	PAONIA ST CL	6255.86	FL–FL INTERCEPT
23	13+02.38	22.00' (RT)	PAONIA ST CL	6266.05	FL–FL INTERCEPT

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
24	12+78.38	21.00' (RT)	PAONIA ST CL	6266.56	FL–FL INTERCEPT
25	25+18.30	22.25' (LT)	PAONIA ST CL	6247.62	FL AT RAMP
26	25+14.30	20.93' (LT)	PAONIA ST CL	6247.65	FL AT RAMP
27	25+18.27	30.69' (LT)	PAONIA ST CL	6248.13	TOP OF RAMP
28	25+14.29	30.70' (LT)	PAONIA ST CL	6248.20	TOP OF RAMP
29	25+14.28	34.70' (LT)	PAONIA ST CL	6248.16	LANDING
30	25+18.28	34.69' (LT)	PAONIA ST CL	6248.09	LANDING
31	25+18.46	32.20' (RT)	PAONIA ST CL	6247.85	FL AT RAMP
32	25+18.49	39.46' (RT)	PAONIA ST CL	6248.30	TOP OF RAMP
33	25+14.49	39.49' (RT)	PAONIA ST CL	6248.38	TOP OF RAMP
34	25+18.49	41.20' (RT)	PAONIA ST CL	6248.41	LANDING
35	25+14.49	41.50' (RT)	PAONIA ST CL	6248.50	LANDING
36	25+14.46	30.90' (RT)	PAONIA ST CL	6247.89	FL AT RAMP
37	23+94.33	30.67' (RT)	PAONIA ST CL	6249.77	TBC AT INLET CORNER
38	23+89.33	30.67' (RT)	PAONIA ST CL	6249.83	TBC AT INLET CORNER
39	23+94.33	20.50' (LT)	PAONIA ST CL	6250.05	TBC AT INLET CORNER
40	23+89.33	20.50' (LT)	PAONIA ST CL	6250.11	TBC AT INLET CORNER
41	20+93.22	20.50' (LT)	PAONIA ST CL	6253.09	TBC AT INLET CORNER
42	21+03.22	20.50' (LT)	PAONIA ST CL	6252.99	TBC AT INLET CORNER
43	21+03.17	21.20' (RT)	PAONIA ST CL	6252.89	TBC AT INLET CORNER
44	20+93.19	20.57' (RT)	PAONIA ST CL	6253.00	TBC AT INLET CORNER
45	24+91.88	20.83' (LT)	PAONIA ST CL	6248.51	TBC AT PI
46	24+86.88	20.50' (LT)	PAONIA ST CL	6248.61	TBC AT PI

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
47	19+04.06	34.00' (RT)	PAONIA ST CL	6256.20	LANDING
48	19+00.06	34.00' (RT)	PAONIA ST CL	6256.28	TOP OF RAMP
49	19+04.06	38.00' (RT)	PAONIA ST CL	6256.28	LANDING
50	19+00.06	38.00' (RT)	PAONIA ST CL	6256.35	TOP OF RAMP
51	18+87.13	38.00' (RT)	PAONIA ST CL	6255.91	FL AT RAMP
52	18+88.68	34.00' (RT)	PAONIA ST CL	6255.83	FL AT RAMP
53	18+61.13	38.00' (RT)	PAONIA ST CL	6256.10	FL AT RAMP
54	18+59.58	34.00' (RT)	PAONIA ST CL	6256.17	FL AT RAMP
55	18+49.53	38.00' (RT)	PAONIA ST CL	6256.90	TOP OF RAMP
56	18+49.53	34.00' (RT)	PAONIA ST CL	6256.82	TOP OF RAMP
57	18+45.53	38.00' (RT)	PAONIA ST CL	6256.98	LANDING
58	18+45.53	34.00' (RT)	PAONIA ST CL	6256.92	LANDING
59	15+94.84	20.50' (RT)	PAONIA ST CL	6261.97	TCB AT INLET CORNER
60	15+84.84	20.50' (RT)	PAONIA ST CL	6262.17	TCB AT INLET CORNER
61	15+94.84	20.50' (LT)	PAONIA ST CL	6261.97	TCB AT INLET CORNER
62	15+84.84	20.50' (LT)	PAONIA ST CL	6262.17	TCB AT INLET CORNER
64	22+40.58	20.50' (LT)	PAONIA ST CL	6251.61	TBC AT PI
65	22+35.58	20.83' (LT)	PAONIA ST CL	6251.67	TBC AT PI
66	13+24.85	34.01' (RT)	PAONIA ST CL	6266.66	LANDING
67	13+24.85	38.00' (RT)	PAONIA ST CL	6266.73	LANDING
68	13+20.88	38.00' (RT)	PAONIA ST CL	6266.80	TOP OF RAMP
69	13+20.88	34.00' (RT)	PAONIA ST CL	6266.74	TOP OF RAMP
70	13+03.38	38.00' (RT)	PAONIA ST CL	6266.27	FL AT RAMP

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
71	13+04.93	34.00' (RT)	PAONIA ST CL	6266.21	FL AT RAMP
72	12+77.38	38.00' (RT)	PAONIA ST CL	6266.92	FL AT RAMP
73	12+75.83	34.00' (RT)	PAONIA ST CL	6266.85	FL AT RAMP
74	12+63.77	38.00' (RT)	PAONIA ST CL	6267.44	TOP OF RAMP
75	12+59.77	38.00' (RT)	PAONIA ST CL	6267.52	LANDING
76	12+63.77	34.00' (RT)	PAONIA ST CL	6267.38	TOP OF RAMP
77	12+59.74	34.00' (RT)	PAONIA ST CL	6267.46	LANDING
78	12+50.88	20.50' (RT)	PAONIA ST CL	6267.46	TCB AT INLET CORNER
79	12+35.88	20.50' (RT)	PAONIA ST CL	6267.63	TCB AT INLET CORNER
80	12+35.88	20.51' (LT)	PAONIA ST CL	6267.63	TCB AT INLET CORNER
81	12+50.88	20.51' (LT)	PAONIA ST CL	6267.45	TCB AT INLET CORNER
82	12+28.32	20.50' (LT)	PAONIA ST CL	6267.71	TBC AT PI
83	12+23.32	20.83' (LT)	PAONIA ST CL	6267.77	TBC AT PI
84	12+08.32	20.83' (LT)	PAONIA ST CL	6267.94	TBC AT PI
85	12+06.32	20.50' (LT)	PAONIA ST CL	6267.47	TBC AT PI
86	25+28.31	38.69' (RT)	PAONIA ST CL	6247.73	GRADE BREAK
87	22+20.58	20.83' (LT)	PAONIA ST CL	6251.82	TBC AT PI
88	22+15.58	20.50' (LT)	PAONIA ST CL	6251.86	TBC AT PI
89	17+40.02	20.50' (LT)	PAONIA ST CL	6259.16	TBC AT PI
90	17+34.97	20.83' (LT)	PAONIA ST CL	6259.26	TBC AT PI
91	17+19.78	20.83' (LT)	PAONIA ST CL	6259.57	TBC AT PI
92	17+14.84	20.50' (LT)	PAONIA ST CL	6259.66	TBC AT PI

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CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	JRM
V-SCALE	N/A	DRAWN BY	JRM
DATE	11/25/20	CHECKED BY	

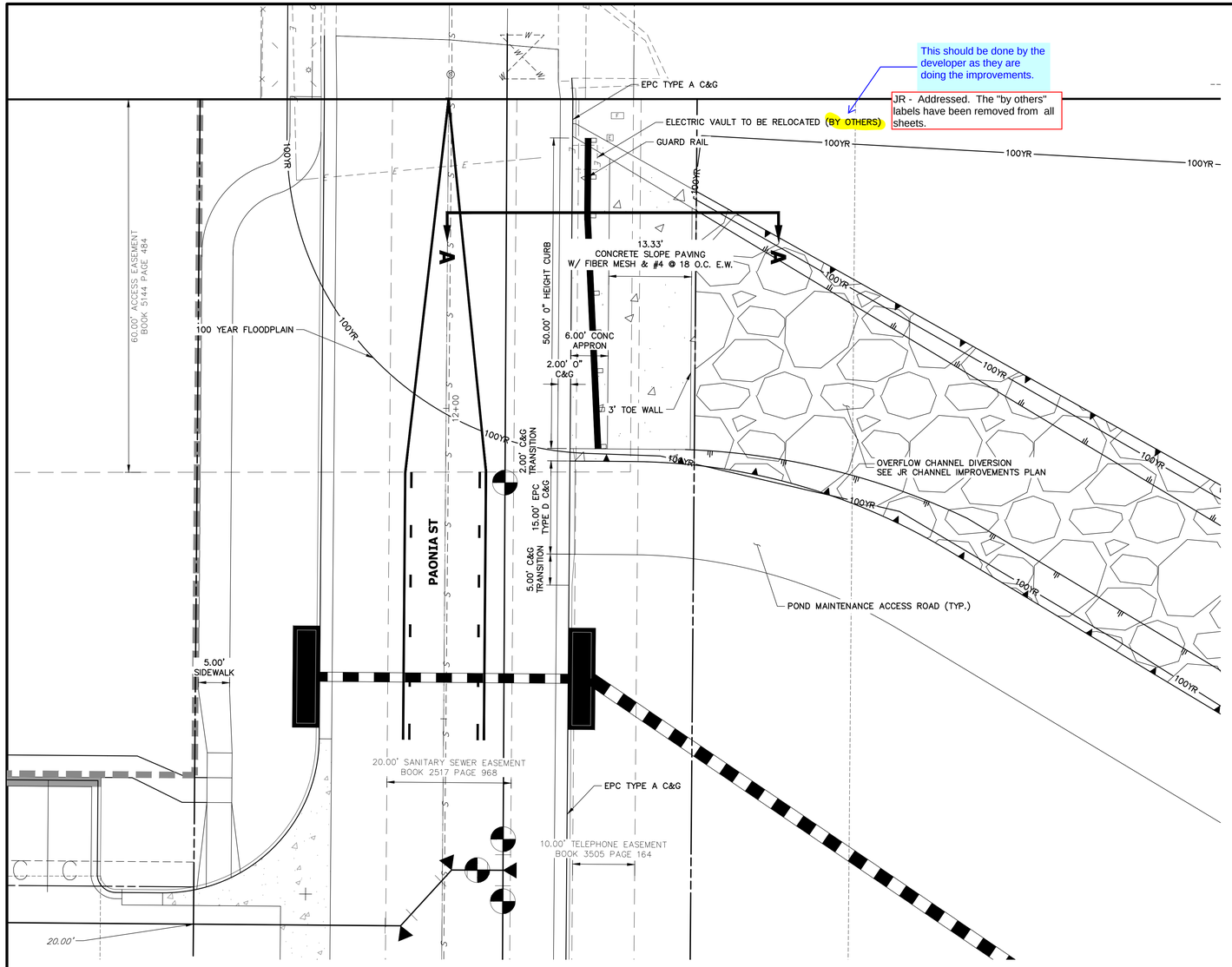
PAONIA STREET IMPROVEMENTS

ROADWAY PLAN AND PROFILE

SHEET 6 OF 9

JOB NO. 25174.00

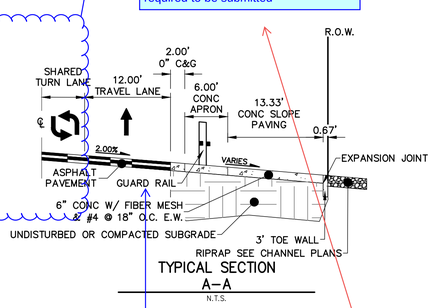
X:\25\10000.all\25174.00\Drawings\Sheet Dwgs\Paonia Street Improvements\25174.00SR01.dwg, SR02, 11/24/2020 3:49:38 PM, CS



This should be done by the developer as they are doing the improvements.

JR - Addressed. The "by others" labels have been removed from all sheets.

Please extend the cross section of the proposed roadway to show the entire cross section. As previously discussed if a superelevated roadway is proposed then a deviation request would be required to be submitted



TYPICAL SECTION
A–A
N.T.S.

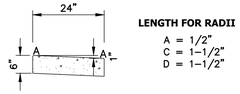
provide detail for the guardrail

JR- Guardrail detail has been added to sheet.

This cross section expanded.

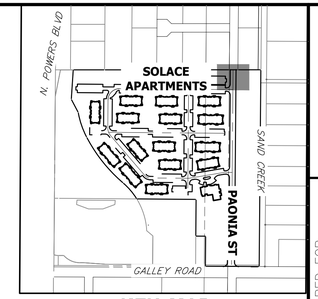
Additional cross sections added to convey how we are simply transitioning from an existing partial superelevation to a standard crown by the time we reach the storm inlets.

NOTE:
"0" HEIGHT CURB SHALL HAVE A SLOPE OF 1/2" PER FOOT AWAY FROM THE ROADWAY CROWN

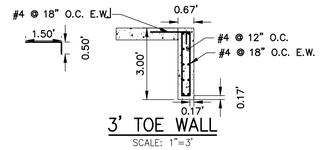


LENGTH FOR RADII
A = 1/2"
C = 1–1/2"
D = 1–1/2"

0" HEIGHT CURB
SCALE: N.T.S.



KEY MAP
SCALE 1"=500'



3' TOE WALL
SCALE: 1"=3'

NOTES

1. ALL PROFILE ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
2. ALL POINT TABULATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.
3. SEE SHEET 2 FOR LEGEND.
4. SEE SHEETS 3 FOR TYPICAL STREET SECTIONS.
5. SIDEWALK SHALL BE A DEPTH OF 6 INCHES.

Know what's below. Call before you dig.

10 5 0 10 20
ORIGINAL SCALE: 1" = 10'

ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

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No.	REVISION	BY	DATE

H-SCALE	1"=10'
V-SCALE	N/A
DATE	11/25/20
DESIGNED BY	JRM
DRAWN BY	APL
CHECKED BY	

PAONIA STREET IMPROVEMENTS
ROADWAY PLAN AND PROFILE

SHEET 7 OF 9
JOB NO. 25174.00

X:\2510000.all\25174\0\Drawings\Sheet Dwgs\Paonia Street Improvements\25174DS102.dwg, St03, 11/24/2020 3:50:18 PM, CS

STA: 20+92.04 (5.50'RT)

STA: 21+65.35 (0.00')

PAONIA ST
URBAN RESIDENTIAL COLLECTOR

160' TAPER

revise to urban non-residential collector

DOG RUN AREA

JR- Addressed.

STA: 22+52.04 (18.00'RT)

STA: 22+52.04 (6.00'RT)

STA: 22+52.04 (6.50'LT)

21+00 22+00 23+00 24+00 25+00

TURN LANE

255' LEFT

Please provide the right turn lane width

JR- Addressed.

PAONIA ST
GALLEY RD

STOP
101

90' ROW

50' FL-FL

12.00' 12.00' 12.00'

the lane widths do not match the cross section. Revise accordingly.

JR- Lane widths have been revised to match cross section.

STA: 25+07.04 (18.00'RT)

STA: 25+07.04 (6.00'RT)

TO BE RELOCATED
STA: 24+17.26 (30.62'LT)
EL: 6248.11'

STA: 24+38.91 (10.51'LT)

STA: 25+38.91 (10.50'LT)

EX. MEDIAN

GALLEY RD
URBAN NONRESIDENTIAL COLLECTOR

MATCH EX STRIPE
STA: 27+53.90 (6.56'LT)

MATCH EX STRIPE
STA: 19+23.91 (5.97'LT)

STA: 20+83.91 (10.16'LT)

STA: 20+83.91 (1.34'RT)

255' LEFT TURN LANE

STA: 23+38.97 (10.58'LT)

STA: 20+83.90 (13.34'RT)

EX. MEDIAN

STA: 23+39.06 (1.42'RT)

255' RIGHT TURN LANE

STA: 23+39.16 (13.42'RT)

100' LEFT TURN LANE

160' TAPER

STA: 25+38.89 (0.50'RT)

STA: 26+38.88 (9.50'LT)

MATCH EX STRIPE
STA: 27+53.54 (4.06'RT)

80' ROW

50' FL-FL

MATCH EX STRIPE
STA: 19+23.91 (5.47'RT)

EX. RIGHT TURN LANE

STA: 24+38.89 (0.49'RT)

200' LEFT TURN LANE

60' ROW

40' FL-FL

160' REDIRECT TAPER

NO PARKING ANY TIME
102

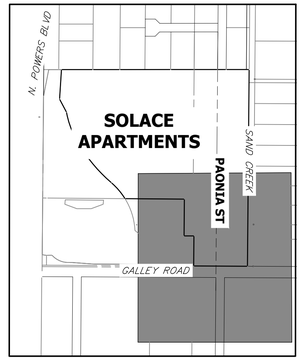
MATCH EXISTING STRIPE

PAONIA ST
URBAN RESIDENTIAL COLLECTOR

EX. STREETSIDE PARKING

Galley is a minor arterial roadway per the TIS and the county roadbook &MTCP. REvise

JR- Addressed.



KEY MAP
SCALE 1"=500'

LEGEND

- PROPOSED SIGN / EXISTING SIGN
- CDOT DELINEATOR TYPE I (CRYSTAL)
- CDOT DELINEATOR TYPE II (CRYSTAL)
- CDOT DELINEATOR TYPE II (YELLOW)
- CDOT DELINEATOR TYPE II (YELLOW) BACK TO BACK
- (XX) EXISTING STRIPE TO REMAIN
- (XX) SEE DEMOLITION PLAN FOR EX STRIPING REMOVAL PROPOSED STRIPE
- [XX] TABULATION KEY
- (A) LANE LINE – 4" WIDE X 10' LONG, 30' GAP, WHITE EPOXY
- (B) CENTER LINE – 4" WIDE, SOLID DOUBLE YELLOW, 4" SEPARATION, EPOXY
- (C) CENTER LINE – 4" WIDE, SOLID YELLOW OUTSIDE, INSIDE 4" X 10' LONG, 30' GAP, YELLOW EPOXY
- (D) CENTER LINE – 4" WIDE, SOLID YELLOW, EPOXY
- (E) EDGE LINE – 4" WIDE, SOLID WHITE EPOXY
- (F1) CROSSWALK – 18"X10' SOLID WHITE PREFORMED THERMO-PLASTIC (MIN. 90 MIL THICKNESS)
- (F2) 18" WIDE CROSSWALK PREFORMED THERMOPLASTIC
- (G) LANE DROP LINE – 4" WIDE X 3' LONG, 9' GAP, WHITE EPOXY
- (H) STOP BAR – 2'xLANE WIDTH SOLID WHITE PREFORMED THERMO-PLASTIC (MIN. 90 MIL THICKNESS)

SYMBOLS (ARROWS, "ONLY")– SHALL BE PREFORMED THERMO-PLASTIC (MIN. 90 MIL THICKNESS)

SIGNAGE TABLULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	NOTES	DESCRIPTION
101	24+99.22	33.50' (RT)	PAONIA ST CL	6248.60		36X36 R-1
102	24+07.27	291.20' (RT)	GALLEY RD CL	6243.59		18" X 12" NO PARKING

Know what's below. Call before you dig.

40 20 0 40 80
ORIGINAL SCALE: 1" = 40'

ENGINEER'S STATEMENT
PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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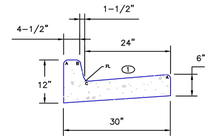
No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	N.A
DATE	11/25/20
DESIGNED BY	CJD
DRAWN BY	CJD
CHECKED BY	

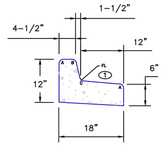
PAONIA STREET IMPROVEMENTS
SIGNAGE AND STRIPING PLAN

SHEET 8 OF 9
JOB NO. 25174.00

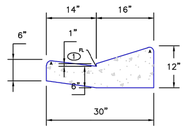
X:\2510000.all\2517400\Drawings\Sheet Dwgs\Paonia Street Improvements\2517400SDQ01.dwg, 24x36 Construction, 11/24/2020 4:07:18 PM, CS



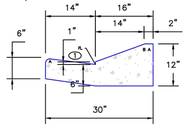
EPC TYPE A
(REVERSE SLOPE OF PAN FOR SPILL CURB)



EPC TYPE B

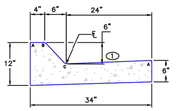


EPC TYPE C
(REVERSE SLOPE OF PAN FOR SPILL CURB)



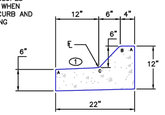
EPC OPTIONAL TYPE C

LEGEND FOR RADII	
A	1/8" TO 1/4"
B	1-1/2"
C	1-1/2" TO 3"



EPC TYPE D
(6" RAMP CURB)

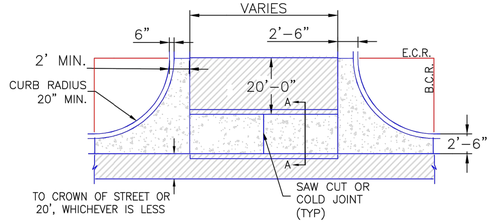
① – GUTTER CROSS SLOPES SHALL BE 1/2 IN./FT. WHEN DRAINING AWAY FROM CURB AND 1 IN./FT. WHEN DRAINING TOWARD CURB.



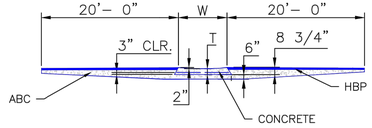
EPC TYPE E
(6" RAMP CURB)

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Curb and Gutter Details Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2-20	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



PLAN VIEW



SECTION A–A

NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

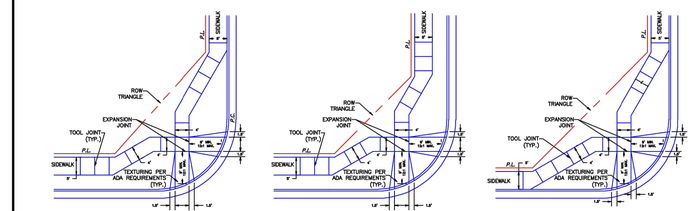
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. ▨ = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).

4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

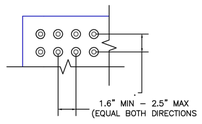
8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Cross Pan Layout Detail Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2-26	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



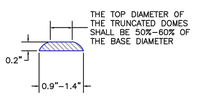
SCALE: NOT TO SCALE

9/16/10 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Pedestrian Intersection Ramp Detail Standard Drawing REVISION DATE: 11/10/04 FILE NAME: SD_2-40	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

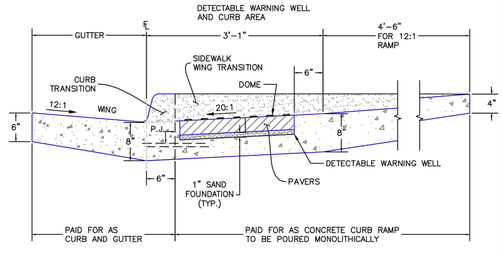
TRUNCATED DOME DETAILS



DOME SPACING



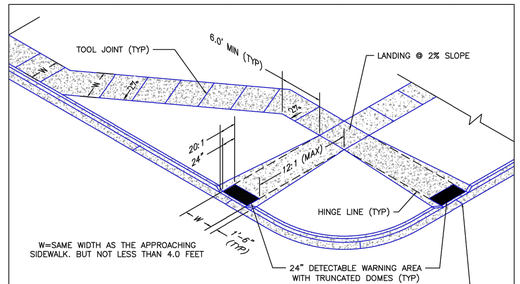
ELEVATION VIEW



P.J.= PERMISSABLE JOINT WITH EPOXY–COATED DEFORMED NO. 4 BARS CONFORMING TO AASHTO M 284 AT 18 IN. SPACING

SIDE CROSS SECTION VIEW OF
DETECTABLE WARNING, WELL, CURB AND GUTTER

1/1/08 DATE APPROVED: John A. McCarty DEPARTMENT OF TRANSPORTATION	Truncated Dome Details Standard Drawing REVISION DATE: 11/25/15 FILE NAME: SD_2-42	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



W=SAME WIDTH AS THE APPROACHING SIDEWALK. BUT NOT LESS THAN 4.0 FEET

LAYOUT CURB SECTIONS SO THAT AT LEAST ONE TOOL JOINT IS WITHIN RAMP THROAT

PEDESTRIAN RAMP NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON–COLORED, NON–SCORED, COARSE BROOM FINISH.
4. RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 12:1 MAXIMUM RUNNING RAMP SLOPE AND 20:1 DETECTABLE WARNING AREA DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS.
5. DETECTABLE WARNING AREA SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING AREA SHALL BE PREFABRICATED, REDDISH INTEGRALLY COLORED, TRUNCATED–DOME, PAVERS. THERMOPLASTIC TRUNCATED DOMES WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING AREA SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
9. ALL RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID–BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
10. AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED RAMP AREAS.

GENERAL NOTES

1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA, THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

7/9/09 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Pedestrian Intersection Ramp Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2-41	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

Details updated to most current versions

These are a repeat of the previous details. Please update the details per the previous comments.

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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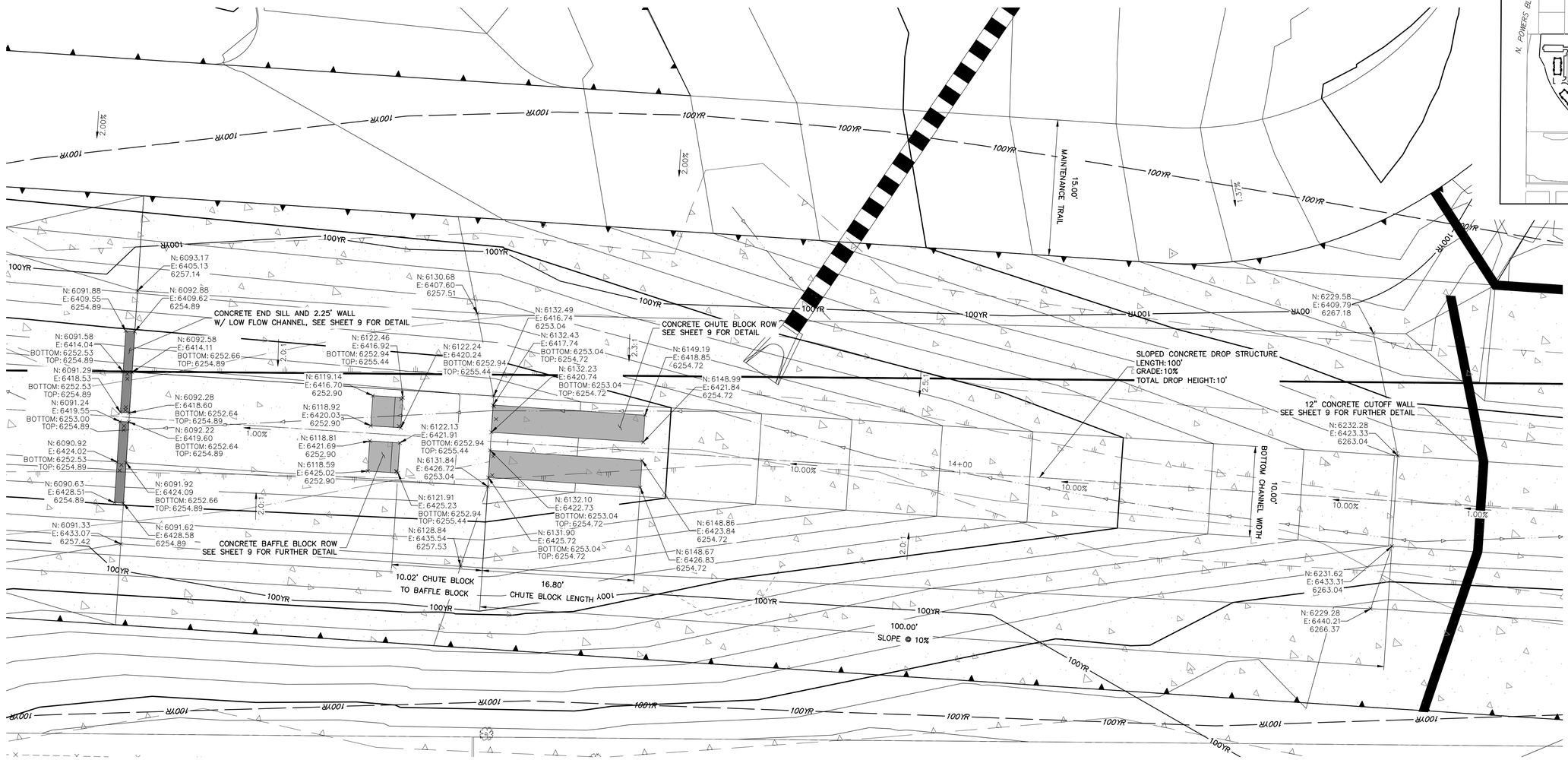
No.	REVISION	BY	DATE

H-SCALE	1"=XX'
V-SCALE	1"=X'
DATE	11/25/20
DESIGNED BY	XXX
DRAWN BY	XXX
CHECKED BY	

PAONIA STREET IMPROVEMENTS
DETAILS

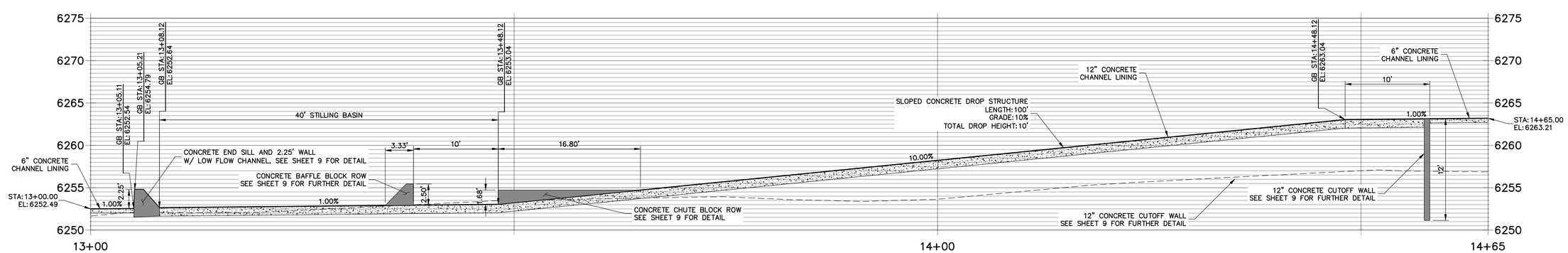
SHEET 9 OF 9
JOB NO. 25174.00

X:\2510000.all\25174\00\Drawings\Sheet Dwgs\Paonia Street Improvements\25174000T01.dwg, DT01, 11/24/2020 3:51:11 PM, CS



KEY MAP
SCALE 1"=500'

DROP 1 PROFILE
STA 13+00.00 TO 14+65.00



6 3 0 6 12
HORIZONTAL
ORIGINAL SCALE: 1" = 6
VERTICAL
ORIGINAL SCALE: 1" = 6

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

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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NO.	REVISION	BY	DATE

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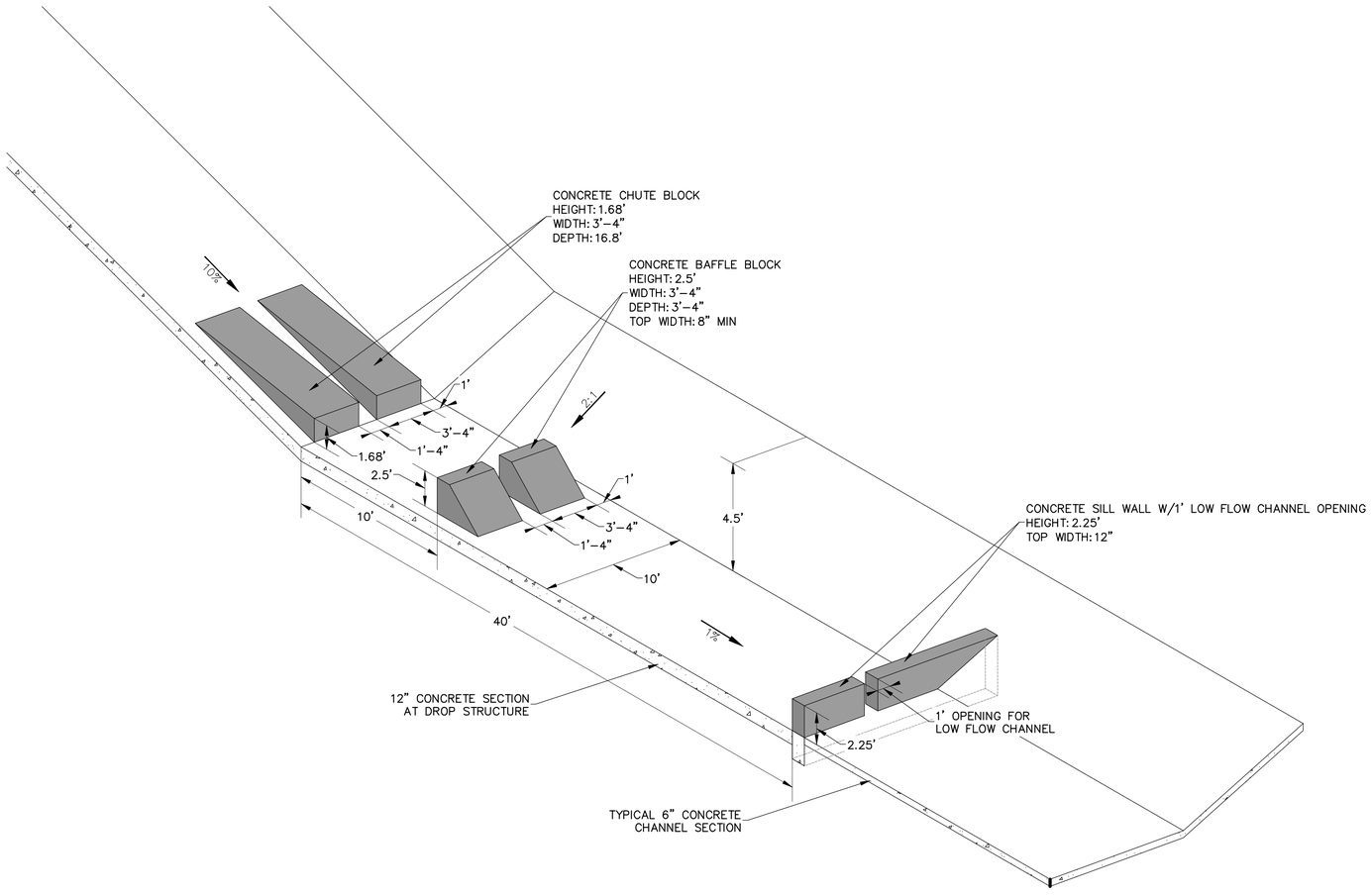
V-SCALE	1"=6'
DATE	11/16/20
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

SAND CREEK CENTER
TRIBUTARY

DROP STRUCTURES PLAN AND PROFILE

SHEET 8 OF 10

JOB NO. 25174.00



Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, ILL 60607
OFFICE PHONE
(734) 216-2577

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

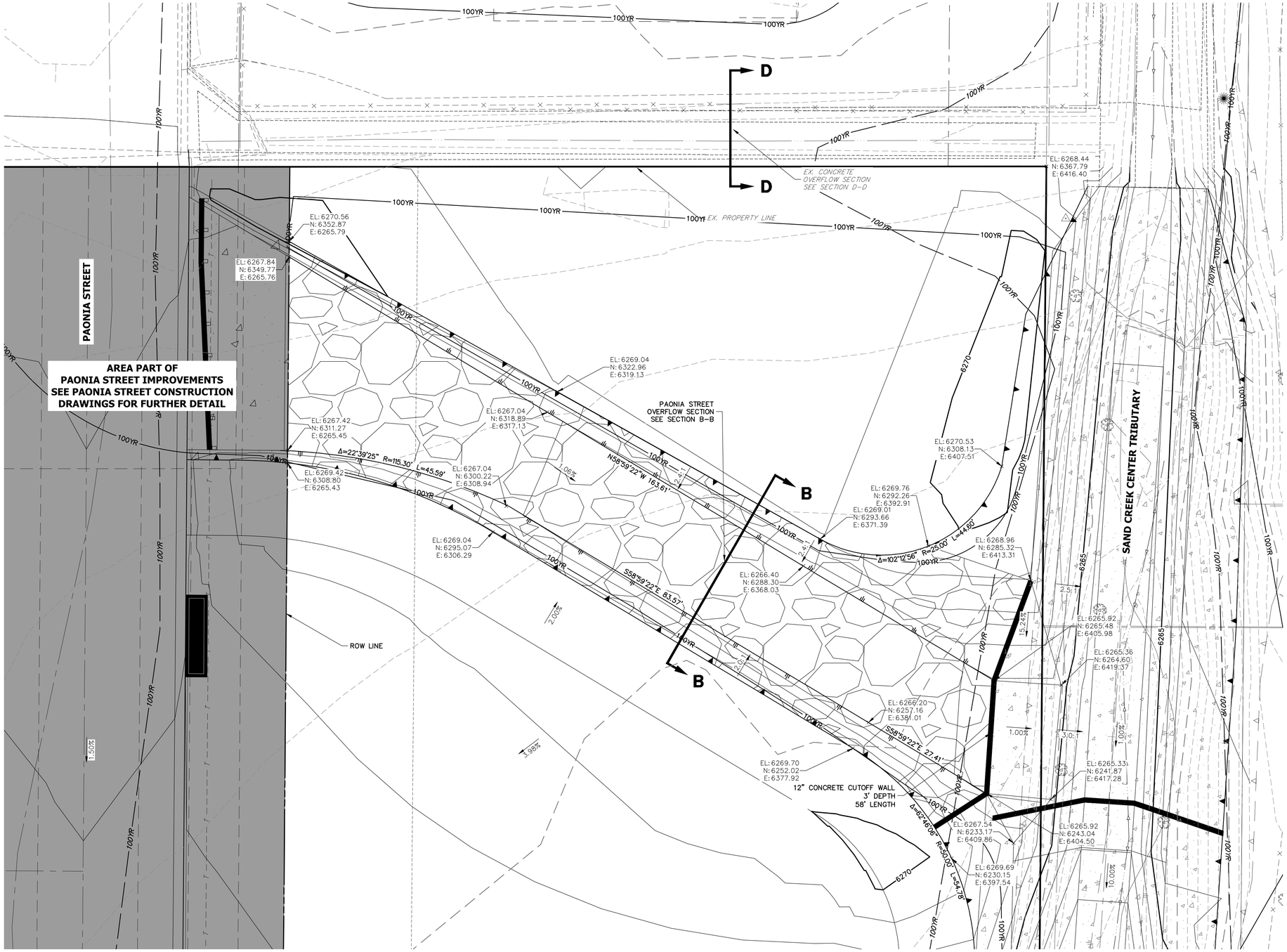
H-SCALE	N/A
V-SCALE	N/A
DATE	11/16/20
DESIGNED BY	JBP
DRAWN BY	JBP
CHECKED BY	

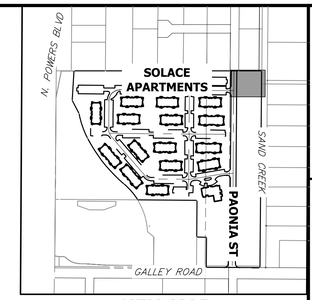
SAND CREEK CENTER TRIBUTARY

DROP STRUCTURE DETAIL SHEETS

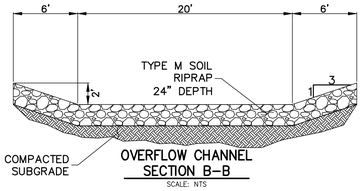
SHEET 9 OF 10

JOB NO. 25174.00

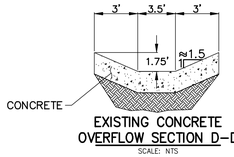




KEY MAP
SCALE 1"=500'



OVERFLOW CHANNEL
SECTION B-B
SCALE: NTS



EXISTING CONCRETE
OVERFLOW SECTION D-D
SCALE: NTS

10 5 0 10 20
ORIGINAL SCALE: 1" = 10'

Know what's below.
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

DATE

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DRAWN BY	JBP
CHECKED BY	

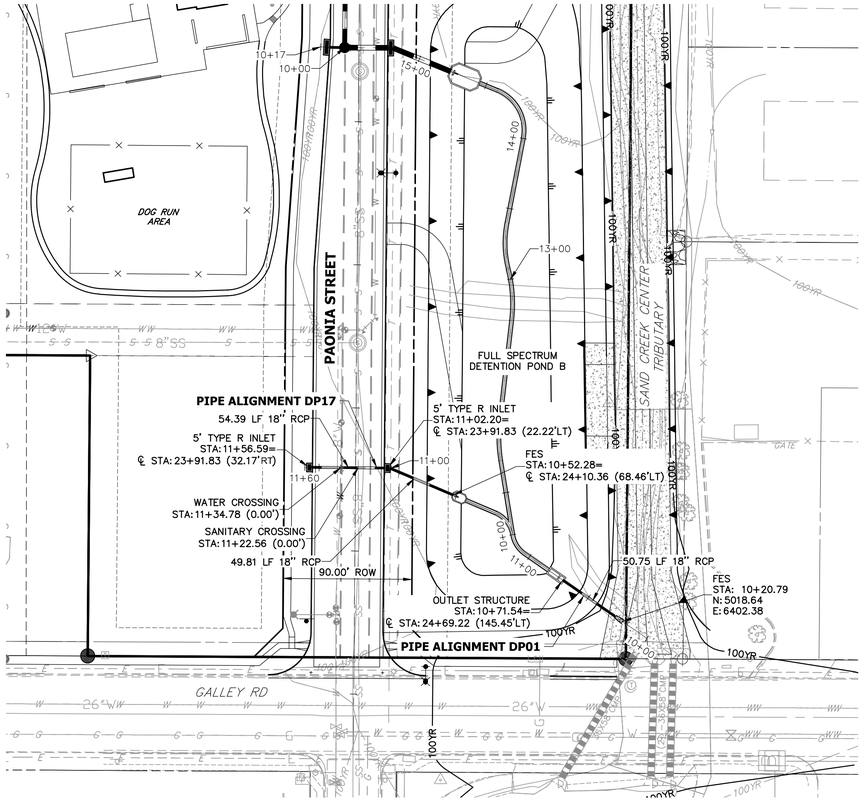
SAND CREEK CENTER TRIBUTARY
PAONIA STREET OVERFLOW PLAN

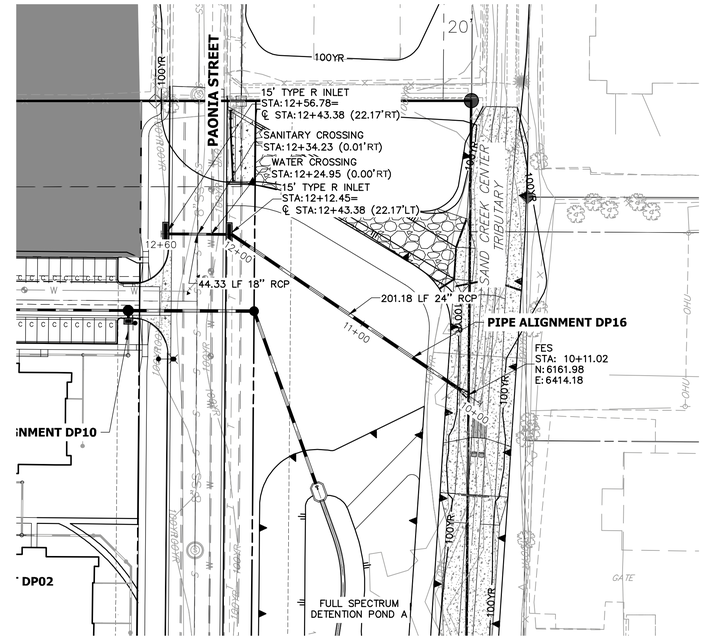
SHEET 10 OF 10

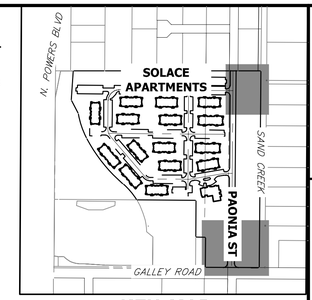
JOB NO. 25174.00

STORM SEWER NOTES

1. SEE DETAIL SHEET 29 FOR APPLICABLE STORM SEWER DETAILS.
2. PIPE LENGTHS MEASURED FROM CENTER OF MANHOLES TO CENTER OF MANHOLES, INSIDE FACE OF INLETS, OUTLET END OF FLARED END SECTIONS AND FACE OF WALLS WHERE APPLICABLE.
3. ℄ STATIONS & OFFSETS ARE LABELED AT CENTER OF STRUCTURE.
4. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS, PRIOR TO EXTENSION OF MAINS AND SERVICE CONNECTIONS. CONTRACTOR TO COORDINATE CONNECTIONS WITH UTILITY PROVIDER.
5. ALL PUBLIC WATER LINES ARE OWNED BY CHEROKEE METROPOLITAN DISTRICT.

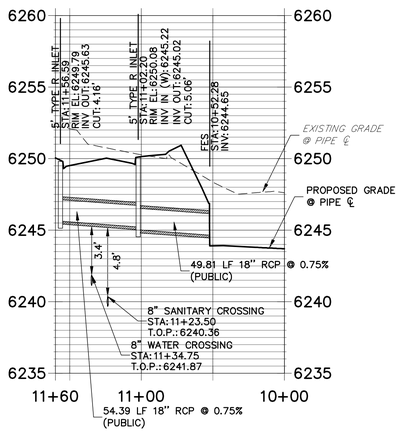




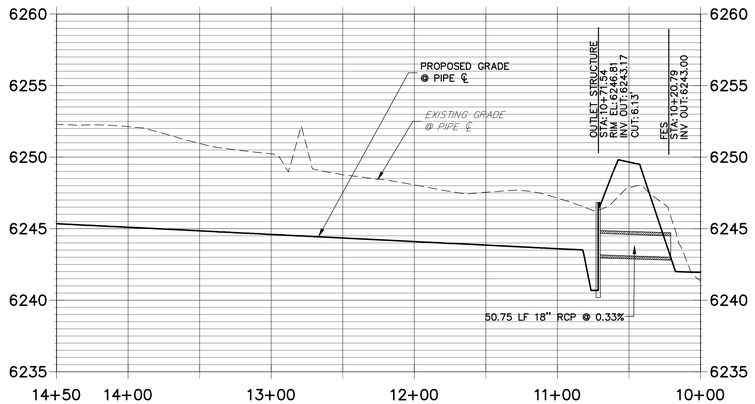


KEY MAP
SCALE 1"=500'

DP17 PROFILE
STA 10+00.00 TO 11+60.00



DP01 PROFILE (1)
STA 10+00.00 TO 14+50.00



DP16 PROFILE
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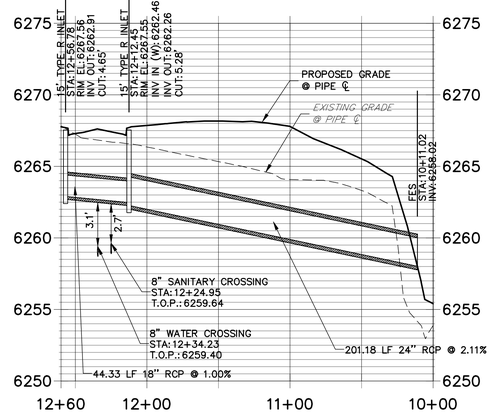

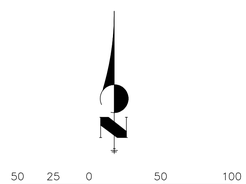

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ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

MIKE A. BRAMLETT 32314 REGISTERED PROFESSIONAL ENGINEER

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V-SCALE	1"=5'
DATE	11/20/20
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

SOLACE APARTMENTS – FILING NO. 1

STORM SEWER PLAN AND PROFILE

SHEET 15 OF 32

JOB NO. 25174.00

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CONTACTS:

OWNER/DEVELOPER	JACKSON DEARBORN PARTNERS 404 S. WELLS STREET, SUITE 400 CHICAGO, IL 60607 ATTN: DANE OLMSTEAD P~(734) 216-2577
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~(719) 593-2593
DEVELOPMENT SERVICES (CMD)	CHEROKEE METROPOLITAN DISTICT 6250 PALMER PARK BLVD COLORADO SPRINGS, CO 80915 P~(719) 597-5080
FIRE PROTECTION DISTRICT	CIMARRON HILLS FIRE DEPARTMENT 1835 TUSKEGEE PL COLORADO SPRINGS, CO 80915 P~(719) 591-0960
PLANNER	N.E.S., INC. 619 NORTH CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 P~(719) 471-0073
GEOTECHNICAL	CTL THOMPSON, INC 5170 MARK DABLING BLVD COLORADO SPRINGS, CO 80918 P~(719) 528-8300
ARCHITECT	LCM ARCHITECTS 819 S WABASH AVE, FIFTH FLOOR CHICAGO, IL 60605 P~(312) 995-5305

SOLACE APARTMENTS

SITUATED IN THE NORTHWEST QUARTER OF SECTION 7
TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN
COUNTY OF EL PASO, STATE OF COLORADO

SANITARY SEWER PLAN AND PROFILE

VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

1 – COVER SHEET
2 – LEGEND
3–6 – SANITARY SEWER PLAN AND PROFILE
7 – DETAIL SHEET

BASIS OF BEARINGS

BENCHMARK

CHEROKEE METROPOLITAN DISTRICT

WASTEWATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: _____ DATE: _____

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO LICENSED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
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BY	DATE

No.	REVISION

H-SCALE	1"=2000'
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SOLACE APARTMENTS
COVER SHEET
SANITARY SEWER PLAN AND PROFILE

SHEET 1 OF 7

JOB NO. 25174.00

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	W
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM AGENCY	

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (ALTERNATE 7)	
NAIL & WASHER – FOUND	NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
SIGN		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

STORM WATER MANAGEMENT

	KEY	SYMBOL
CHECK DAM	CD	
CONSTRUCTION ROAD STABILIZATION	CRS	
CURB SOCK INLET PROTECTION	CS	
CONCRETE WASHOUT AREA	CWA	
DIVERSION DITCH AND DIKE, TEMPORARY	DD	
DIVERSION CHANNEL, TEMPORARY	DV	
DEWATERING	DW	
EROSION CONTROL BLANKET	ECB	
INLET FILTER	IF	
INLET PROTECTION	IP	
MULCHING	MU	
OUTLET PROTECTION	OP	
PAVED FLUME	PF	
PERMENENT SEEDING	PS	
REINFORCED CONCRETE DAM	RCD	
ROUGH CUT STREET CONTROL	RCS	
SEDIMENT BASIN	SB	
SEDIMENT CONTROL LOG	SCL	
SILT FENCE	SF	
SURFACE ROUGHENING	SR	
STABILIZED STAGING AREA	SSA	
SEDIMENT TRAP	ST	
STRAW BALE BARRIER	STB	
TERRACING	TER	
TEMPORARY SEEDING	TS	
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	TSC C	
TEMPORARY STREAM CROSSING FORD TYPE	TSC F	
TEMPORARY SLOPE DRAIN	TSD	
VEHICLE TRACKING CONTROL	VTC	
VEHICLE TRACKING CONTROL WITH WASH RACK	WR	

DRAINAGE REPORT PLANS

	KEY
BASIN DESIGNATION (NO COEFFICIENT)	#.#
BASIN DESIGNATION (1 COEFFICIENT)	#.# #
BASIN DESIGNATION (2 COEFFICIENTS)	#.# # #
ANALISYS POINT IDENTIFIER	#
BASIN DESIGNATION (HISTORIC)	#.-#
BASIN DESIGNATION (DEVELOPED)	#.##
SUB–BASIN DESIGNATION (DEVELOPED)	#.##
DRAINAGE PIPE IDENTIFIER	##
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	##
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	?
SWMM DESIGNATION 1	#
SWMM DESIGNATION 2	#
SWMM DESIGNATION 3	#
SWMM DESIGNATION 4	?

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V–SCALE	N/A	DRAWN BY	APL
DATE	11/25/20	CHECKED BY	

SOLACE APARTMENTS

COVER SHEET

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT 32314 COLORADO REGISTERED PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

SHEET 2 OF 7

JOB NO. 25174.00

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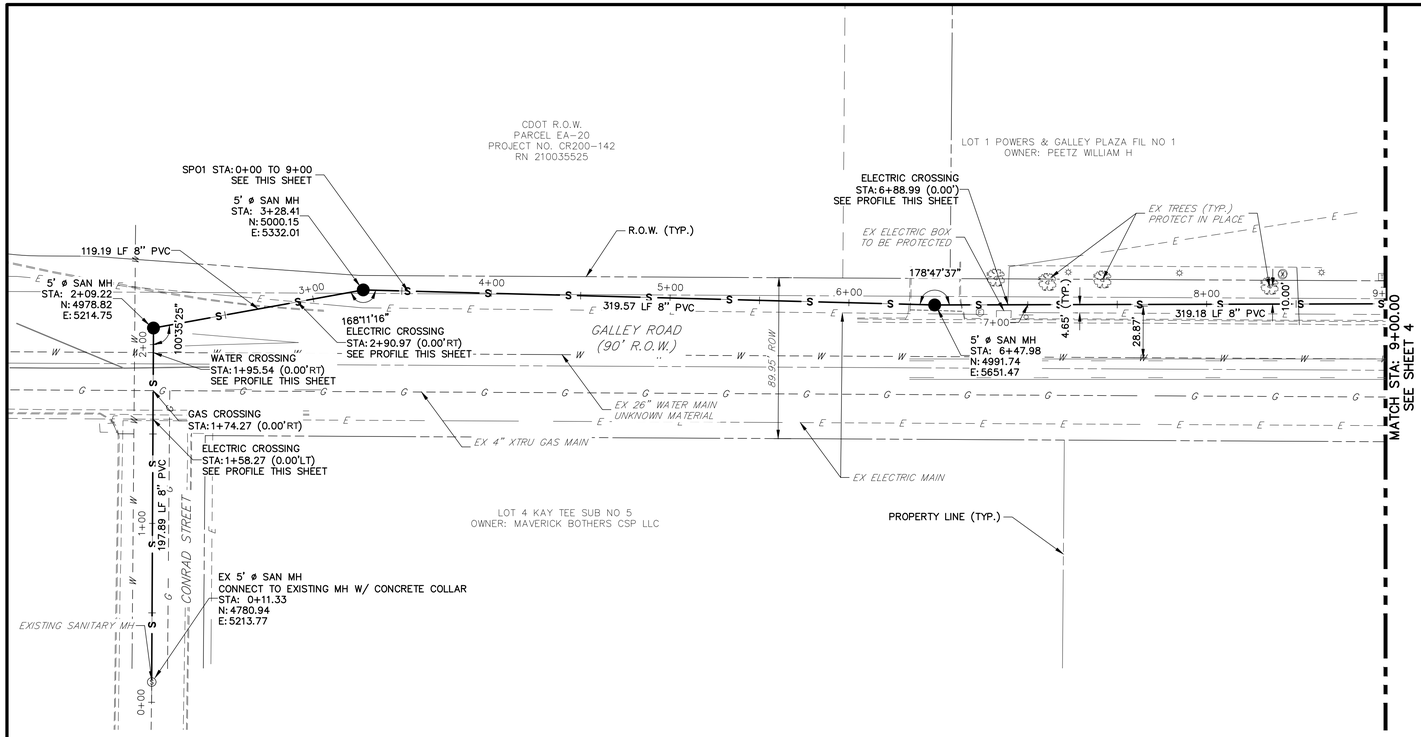
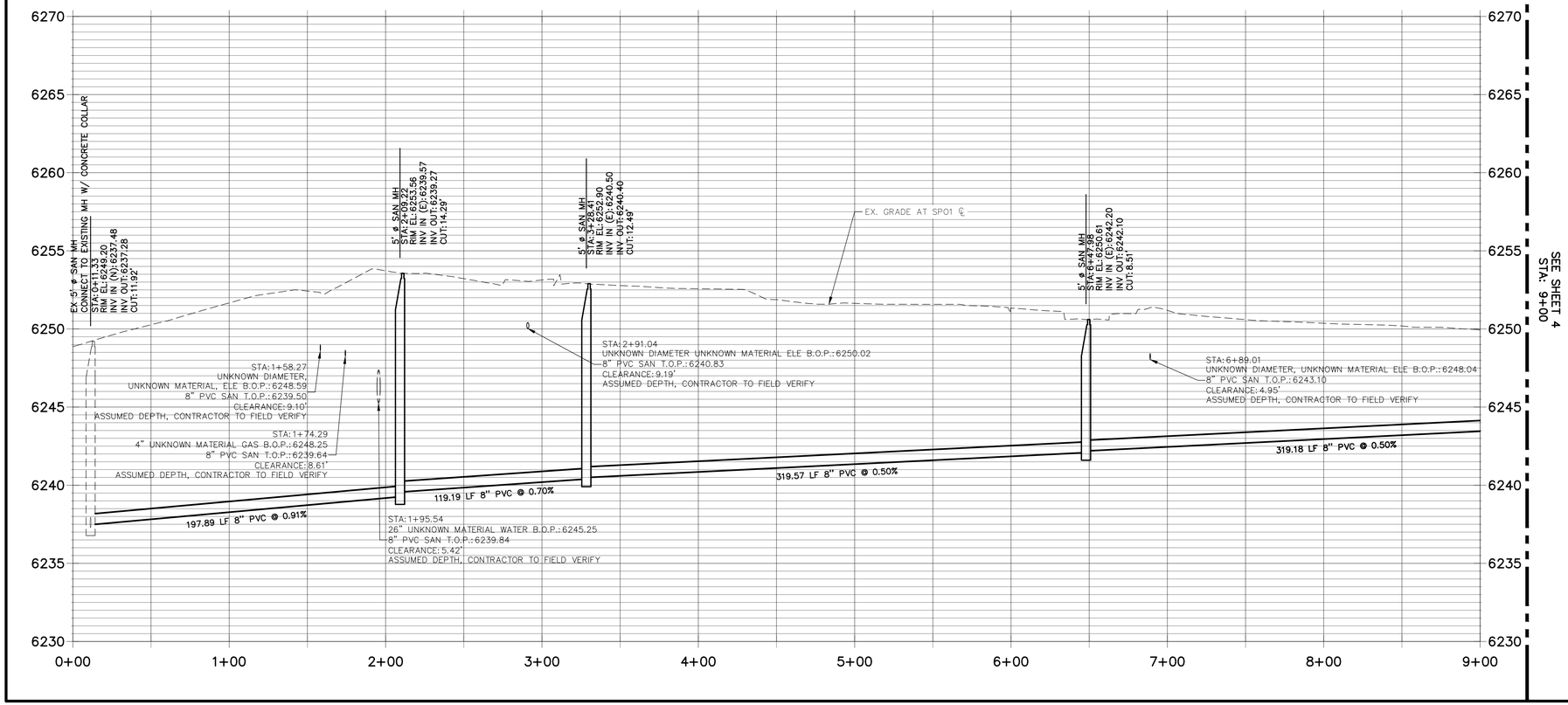


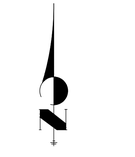
SP01 PROFILE (1)
STA 0+00.00 TO 9+00.00



NOTES:

1. ALL PROPOSED SANITARY SEWER ON THESE PLANS IS PUBLIC, UNLESS OTHERWISE NOTED.
2. SEE PROFILE VIEW FOR PIPE SLOPES AND GRADE.
3. SEE PROFILE VIEW FOR MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS.
4. SEE JR POTABLE WATER PLANS FOR WATER DESIGN AND DETAILS.
5. SEE JR STREET, STORM, AND GESC PLANS FOR SURFACE IMPROVEMENTS, GRADING, AND STORM WATER SYSTEM DESIGNS.
6. ALL PIPES SHALL BE SDR-35

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



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JACKSON DEARBORN PARTNERS
404 S WELLS STREET SUITE 400
CHICAGO, IL 60607
ATTN: DANE OLMSTEAD
734-216-2577
DOLMSTEAD@JACKSONDEARBORN.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

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V-SCALE 1"=4'
DATE 11/25/20
DESIGNED BY APL
DRAWN BY APL
CHECKED BY

SOLACE APARTMENTS

SANITARY SEWER PLAN AND PROFILE

SHEET 3 OF 7
JOB NO. 25174.00

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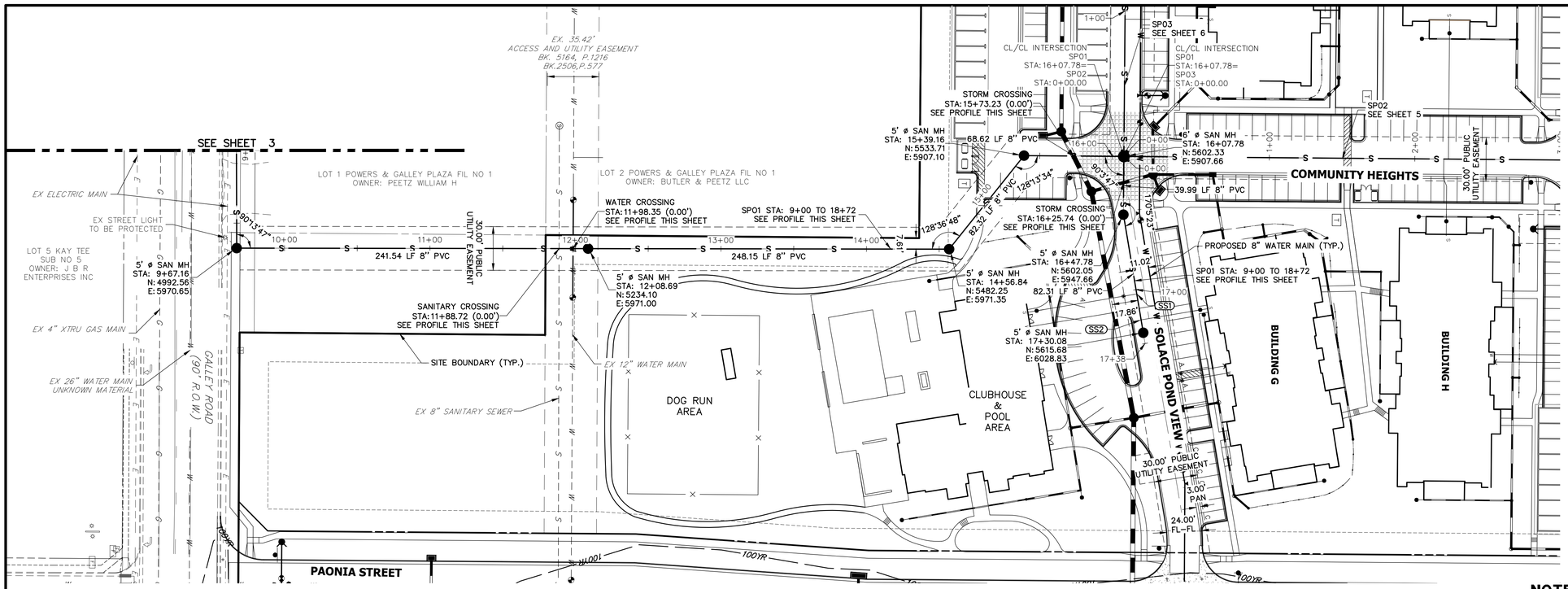

SP01 PROFILE (2)
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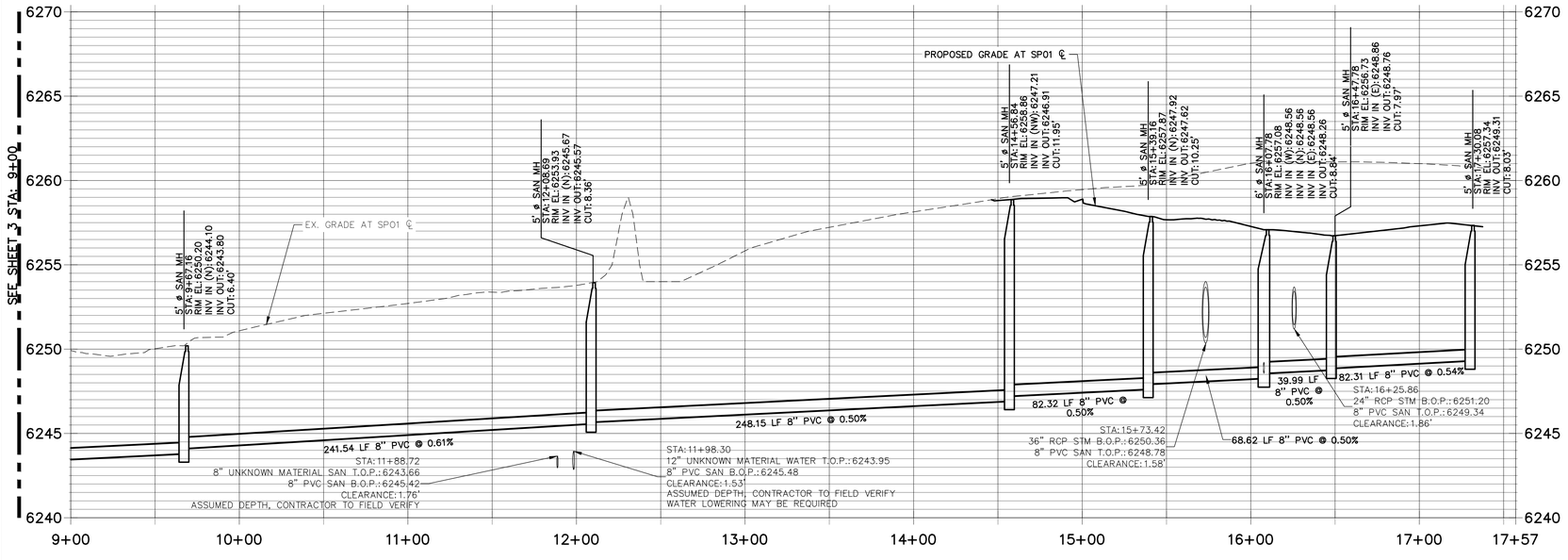

NOTES:

1. ALL PROPOSED SANITARY SEWER ON THESE PLANS IS PUBLIC, UNLESS OTHERWISE NOTED.
2. SEE PROFILE VIEW FOR PIPE SLOPES AND GRADE.
3. SEE PROFILE VIEW FOR MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS.
4. SEE JR POTABLE WATER PLANS FOR WATER DESIGN AND DETAILS.
5. SEE JR STREET, STORM, AND GESC PLANS FOR SURFACE IMPROVEMENTS, GRADING, AND STORM WATER SYSTEM DESIGNS.
6. ALL PIPES SHALL BE SDR-35

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

UTILITY SERVICE TABULATION			
SERVICE/BLDG #	STATION	ALIGNMENT	DESCRIPTION
SS1	17+03.05	SP01	SANITARY SEWER SERVICE
SS2	17+21.09	SP01	SANITARY SEWER SERVICE

40 20 0 40

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

COLORADO MIKE A. BRAMLETT 32314 REGISTERED PROFESSIONAL ENGINEER DATE

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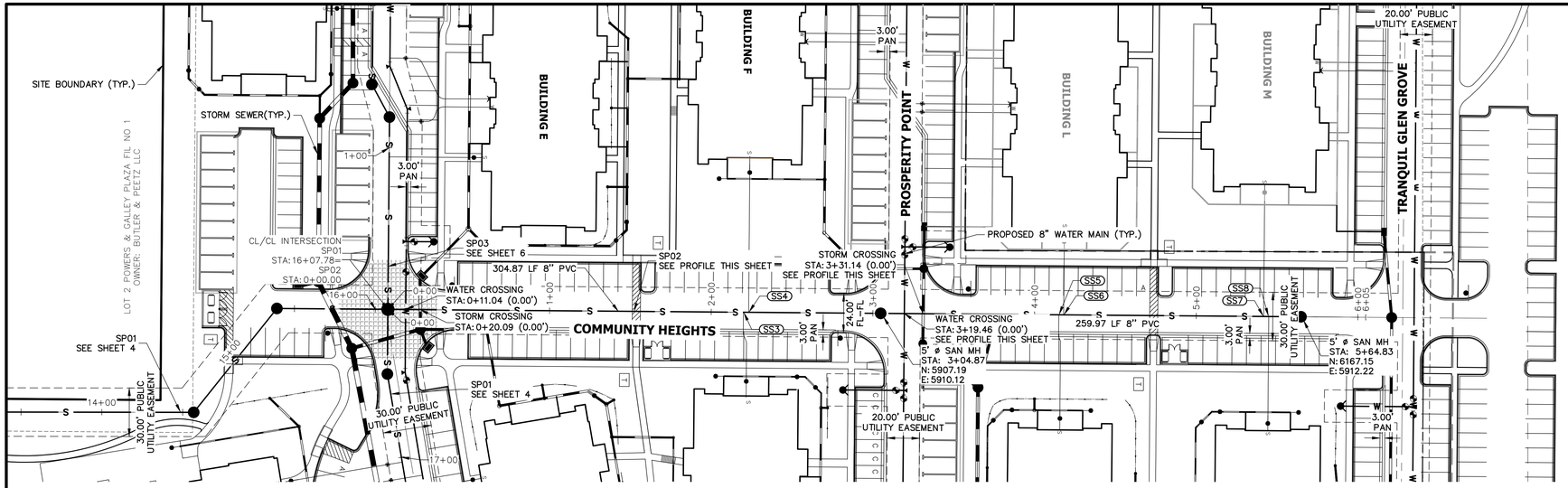

SP02 PROFILE
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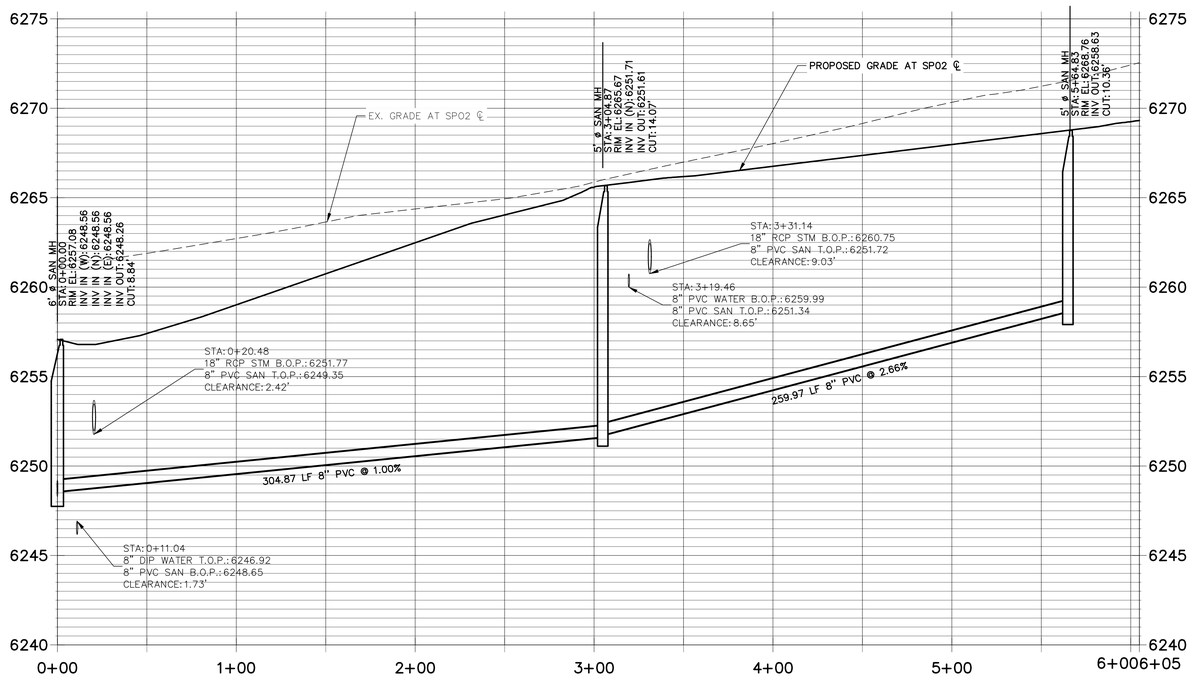

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UTILITY SERVICE TABULATION			
SERVICE/BLDG #	STATION	ALIGNMENT	DESCRIPTION
SS3	2+19.93	SP02	SANITARY SEWER SERVICE
SS4	2+23.14	SP02	SANITARY SEWER SERVICE
SS5	4+15.01	SP02	SANITARY SEWER SERVICE
SS6	4+18.01	SP02	SANITARY SEWER SERVICE
SS7	5+41.73	SP02	SANITARY SEWER SERVICE
SS8	5+44.87	SP02	SANITARY SEWER SERVICE

40 20 0 40

HORIZONTAL
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VERTICAL
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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SANITARY SEWER PLAN AND PROFILE

SHEET 5 OF 7

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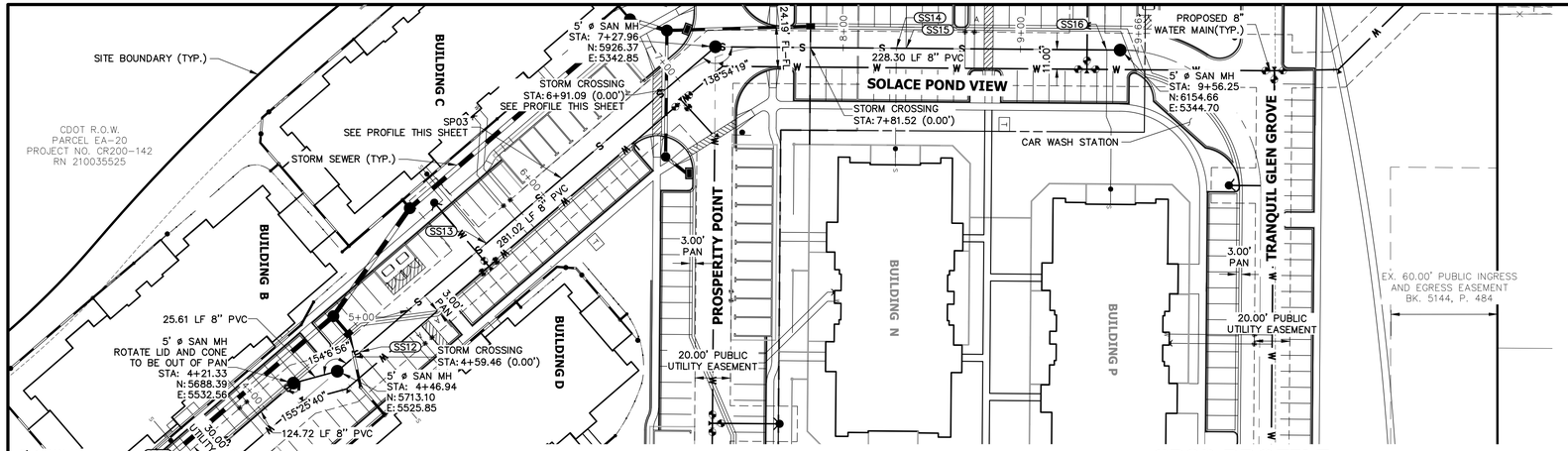

SP03 PROFILE
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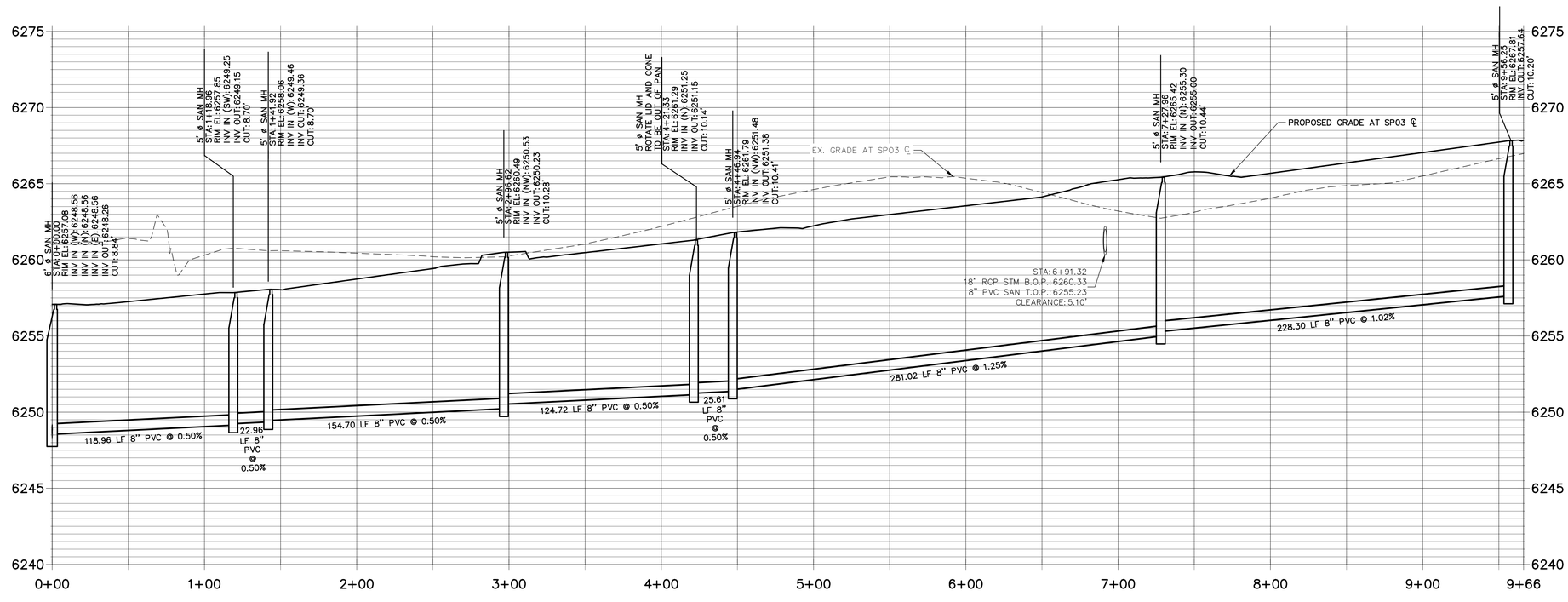

UTILITY SERVICE TABULATION			
SERVICE/BLDG #	STATION	ALIGNMENT	DESCRIPTION
SS9	0+94.37	SP03	SANITARY SEWER SERVICE
SS10	1+88.72	SP03	SANITARY SEWER SERVICE
SS11	3+47.72	SP03	SANITARY SEWER SERVICE
SS12	4+63.56	SP03	SANITARY SEWER SERVICE
SS13	5+57.73	SP03	SANITARY SEWER SERVICE
SS14	8+29.98	SP03	SANITARY SEWER SERVICE
SS15	8+35.48	SP03	SANITARY SEWER SERVICE
SS16	9+48.75	SP03	SANITARY SEWER SERVICE

40 20 0 40

HORIZONTAL
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COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER DATE

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SANITARY SEWER PLAN AND PROFILE

SHEET 6 OF 7

JOB NO. 25174.00

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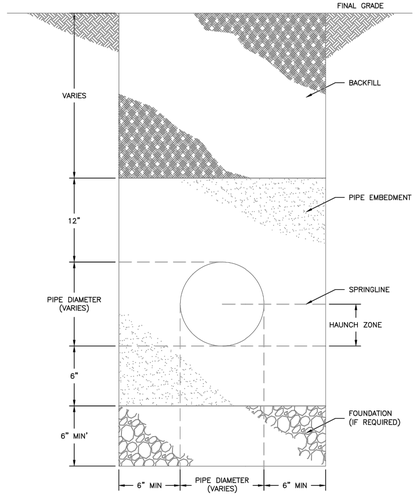
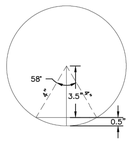


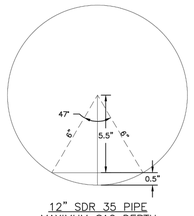
NOTE:

1. TRENCH BACKFILL SHALL CONFORM TO THE SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION AND ASTM D2321.

Colorado Springs Utilities It's how we're all connected	TYPICAL TRENCH SECTION	C2-1 DATED 5/2015

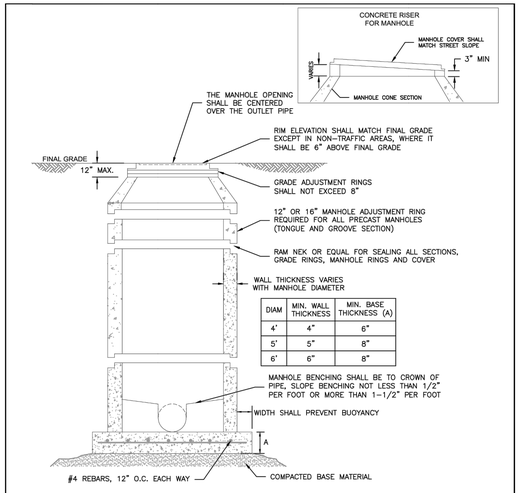


8" SDR 35 PIPE
MAXIMUM SAG DEPTH



12" SDR 35 PIPE
MAXIMUM SAG DEPTH

Colorado Springs Utilities It's how we're all connected	MAXIMUM SAG DEPTH FOR WASTEWATER MAINS	C2-13 DATED 5/2015



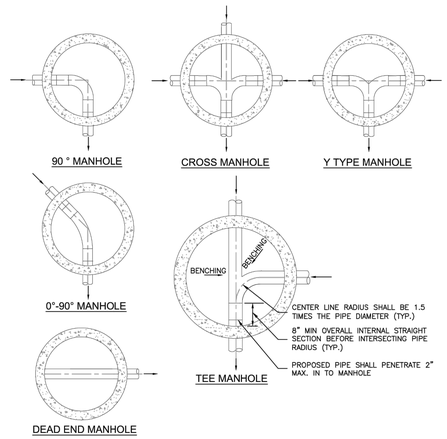
DIAM	MIN. WALL THICKNESS	MIN. BASE THICKNESS (A)
4'	4"	6"
5'	5"	8"
6'	6"	8"

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4000 PSI @ 28 DAYS AND DESIGNED FOR HS-20 LOADING CONDITIONS.
2. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
3. FOR CAST IN PLACE MANHOLES, DO NOT DROP CONCRETE A DISTANCE OF MORE THAN 5' UNLESS APPROVED BY COLORADO SPRINGS UTILITIES.
4. 3/4" CRUSHED ROCK REQUIRED UNDER BASE TO A DEPTH OF 6" UP TO SPRINGLINE OF PIPE, 2'-3" RADIUS AROUND BASE.
5. ALL STEPS SHALL BE REMOVED FOLLOWING CONSTRUCTION.
6. STRUCTURAL REINFORCEMENT SHALL COMPLY TO ASTM C-478. ASTM C-478 SHALL BE STAMPED ON THE OUTSIDE OF THE MANHOLE.

Colorado Springs Utilities It's how we're all connected	STANDARD CONCRETE MANHOLE	C3-1 DATED 5/2015

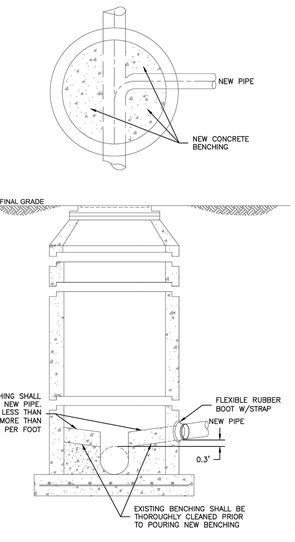
TYPICAL INTERSECTING PIPE MANHOLE LAYOUTS



NOTES:

1. SEE DETAIL DRAWING C3-1 FOR MANHOLE REQUIREMENTS.
2. LAYOUTS SHOWN ARE FOR 8"-12" PIPES; LAYOUTS FOR LARGER DIAMETER PIPELINES AND MANHOLES SHALL BE DESIGNED BY THE DESIGN ENGINEER AND APPROVED BY COLORADO SPRINGS UTILITIES.
3. TO BE READ IN CONJUNCTION WITH CHAPTER 2, MANHOLE SIZES.

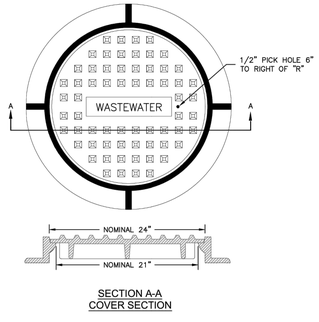
Colorado Springs Utilities It's how we're all connected	TYPICAL MANHOLE LAYOUTS AND INTERSECTIONS	C3-2 DATED 5/2015



NOTES:

1. SEE DETAIL DRAWING C3-1 FOR MANHOLE REQUIREMENTS.

Colorado Springs Utilities It's how we're all connected	CORE DRILLING INTO AN EXISTING MANHOLE	C3-3 DATED 5/2015

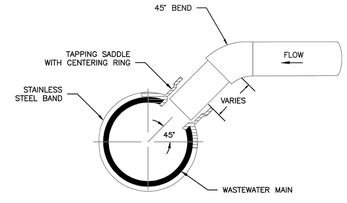


SECTION A-A
COVER SECTION

NOTES:

1. SEE CHAPTER 4 FOR ADDITIONAL INFORMATION AND SPECIFIC DIMENSIONS.

Colorado Springs Utilities It's how we're all connected	STANDARD MANHOLE RING AND COVER IN TRAFFIC AREAS	C3-9 DATED 5/2015



TYPICAL WASTEWATER SERVICE TAPPING SADDLE

NOTES:

1. WHEN THE WASTEWATER MAIN IS VCP, USE THE SDR 35 PVC SADDLE WITH A LARGER SKIRT. SADDLE SHALL BE ONE NOMINAL SIZE LARGER THAN THE WASTEWATER MAIN.
2. PIPE WILL BE CUT WITH AN O.D. HOLE SAW OR TAPPING MACHINE. A 4-1/2" O.D. HOLE SAW SHALL BE USED FOR 4" TAPS AND A 6-1/2" O.D. HOLE SAW SHALL BE USED FOR 6" TAPS.
3. ONLY 4" AND 6" TAP SIZES ARE ALLOWED.
4. WASTEWATER TAPPING SADDLES SHALL HAVE A CENTERING RING.
5. A GASKET SHALL BE USED TO ENSURE AN AIRTIGHT SEAL BETWEEN THE SADDLE AND THE PIPE.

Colorado Springs Utilities It's how we're all connected	TYPICAL WASTEWATER SERVICE LINE TAPPING METHOD	D1-6 DATED 5/2015

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SOLACE APARTMENTS

DETAIL SHEET

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

SHEET 7 OF 7

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SOLACE APARTMENTS

SITUATED IN THE NORTHWEST QUARTER OF SECTION 7
TOWNSHIP 14 SOUTH, RANG 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN
COUNTY OF EL PASO, STATE OF COLORADO

WATER DISTRIBUTION PLAN

CONTACTS:

OWNER/DEVELOPER	JACKSON DEARBORN PARTNERS 404 S. WELLS STREET, SUITE 400 CHICAGO, IL 60607 ATTN: DANE OLMSTEAD P~(734) 216-2577
ENGINEER/SURVEYOR	JR ENGINEERING, LLC ATTN: MIKE A. BRAMLETT 5475 TECH CENTER DRIVE, SUITE 235 COLORADO SPRINGS, CO 80919 P~(719) 593-2593
DEVELOPMENT SERVICES (CMD)	CHEROKEE METROPOLITAN DISTICT 6250 PALMER PARK BLVD COLORADO SPRINGS, CO 80915 P~(719) 597-5080
FIRE PROTECTION DISTRICT	CIMARRON HILLS FIRE DEPARTMENT 1835 TUSKEGEE PL COLORADO SPRINGS, CO 80915 P~(719) 591-0960
PLANNER	N.E.S., INC. 619 NORTH CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 P~(719) 471-0073
GEOTECHNICAL	CTL THOMPSON, INC 5170 MARK DABLING BLVD COLORADO SPRINGS, CO 80918 P~(719) 528-8300
ARCHITECT	LCM ARCHITECTS 819 S WABASH AVE, FIFTH FLOOR CHICAGO, IL 60605 P~(312) 995-5305

BASIS OF BEARINGS

BENCHMARK

VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

1 – COVER SHEET
2 – LEGEND AND NOTES
3–6 – WATER DISTRIBUTION PLAN
7–8 – DETAIL SHEETS

DISTRICT MAIN EXTENSIONS

WATER STATEMENT

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THE INSTALLATION OF THESE PROPOSED WATER FACILITIES WILL BE MADE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT SPECIFICATIONS AND SHALL PROVIDE A MINIMUM OF 5 FEET AND A MAXIMUM OF 6 FEET OF COVER OVER THE WATER MAIN(S). ANY CHANGES REQUIRED TO MEET THE ABOVE STIPULATIONS SHALL BE AT THE EXPENSE OF THE OWNER/DEVELOPER. COVER IN EXCESS OF 8 FEET SHALL BE SUPPORTED BY PLAN AND PROFILE DRAWINGS APPROVED BY THE DISTRICT.

SIGNED: _____ DATE: _____
OWNER/DEVELOPER

DBA: _____

ADDRESS: _____

ALL HYDRANTS SHALL BE INSTALLED ACCORDING TO THE DISTRICT'S SPECIFICATIONS.

WATER INSTALLATION CORROSION CONTROL REQUIREMENTS

NONE REQUIRED ☐

REQUIRED, DESCRIBED AS FOLLOWS: ☐

WATER PLAN APPROVAL

SIGNED: _____ DATE: _____
CHEROKEE METROPOLITAN DISTRICT

APPROVAL EXPIRES ONE YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

Know what's below. Call before you dig.

CHEROKEE METROPOLITAN DISTRICT

WATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: _____ DATE: _____

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO LICENSED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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COVER SHEET

WATER DISTRIBUTION PLAN

SHEET 1 OF 9

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	W
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE	W	
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER	M	
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER	G	
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM AGENCY	

MONUMENTATION LEGEND

ALUMINUM CAP – FOUND	AC
BRASS CAP – FOUND	BC
BENCHMARK – FOUND	
CROSS – FOUND	
MONUMENT – SET	
MONUMENT – FOUND (DEFAULT)	
MONUMENT – FOUND (ALTERNATE 1)	
MONUMENT – FOUND (ALTERNATE 2)	
MONUMENT – FOUND (ALTERNATE 3)	
MONUMENT – FOUND (ALTERNATE 4)	
MONUMENT – FOUND (ALTERNATE 5)	
MONUMENT – FOUND (ALTERNATE 6)	
MONUMENT – FOUND (ALTERNATE 7)	
NAIL & WASHER – FOUND	NAIL & WASHER
PANEL – FOUND	
PK NAIL – FOUND	PK NAIL
ROW MONUMENT – FOUND	
ROW MARKER – FOUND	
SECTION CORNER – FOUND	
SECTION CORNER – SET	
QUARTER–SECTION CORNER – FOUND	
QUARTER–SECTION CORNER – SET	
SECTION CENTER – FOUND	
SECTION CENTER – FOUND	
CONTROL/TRAVERSE POINT – SET	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
SIGN		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

STORM WATER MANAGEMENT

	KEY	SYMBOL
CHECK DAM	CD	
CONSTRUCTION ROAD STABILIZATION	CRS	
CURB SOCK INLET PROTECTION	CS	
CONCRETE WASHOUT AREA	CWA	
DIVERSION DITCH AND DIKE, TEMPORARY	DD	
DIVERSION CHANNEL, TEMPORARY	DV	
DEWATERING	DW	
EROSION CONTROL BLANKET	ECB	
INLET FILTER	IF	
INLET PROTECTION	IP	
MULCHING	MU	
OUTLET PROTECTION	OP	
PAVED FLUME	PF	
PERMENENT SEEDING	PS	
REINFORCED CONCRETE DAM	RCD	
ROUGH CUT STREET CONTROL	RCS	
SEDIMENT BASIN	SB	
SEDIMENT CONTROL LOG	SCL	
SILT FENCE	SF	
SURFACE ROUGHENING	SR	
STABILIZED STAGING AREA	SSA	
SEDIMENT TRAP	ST	
STRAW BALE BARRIER	STB	
TERRACING	TER	
TEMPORARY SEEDING	TS	
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	TSC C	
TEMPORARY STREAM CROSSING FORD TYPE	TSC F	
TEMPORARY SLOPE DRAIN	TSD	
VEHICLE TRACKING CONTROL	VTC	
VEHICLE TRACKING CONTROL WITH WASH RACK	WR	

DRAINAGE REPORT PLANS

	KEY
BASIN DESIGNATION (NO COEFFICIENT)	#/#.#
BASIN DESIGNATION (1 COEFFICIENT)	#/#.#/#
BASIN DESIGNATION (2 COEFFICIENTS)	#/#.#/#
ANALISYS POINT IDENTIFIER	#
BASIN DESIGNATION (HISTORIC)	#/#.#
BASIN DESIGNATION (DEVELOPED)	#/##
SUB–BASIN DESIGNATION (DEVELOPED)	#/##
DRAINAGE PIPE IDENTIFIER	##
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	##
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	?
SWMM DESIGNATION 1	#
SWMM DESIGNATION 2	#
SWMM DESIGNATION 3	#
SWMM DESIGNATION 4	?

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E. 32314 — DATE

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

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Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A	DESIGNED BY	APL
V–SCALE	N/A	DRAWN BY	APL
DATE	11/25/20	CHECKED BY	

SOLACE APARTMENTS

LEGEND AND NOTES

SHEET 2 OF 9

JOB NO. 25174.00

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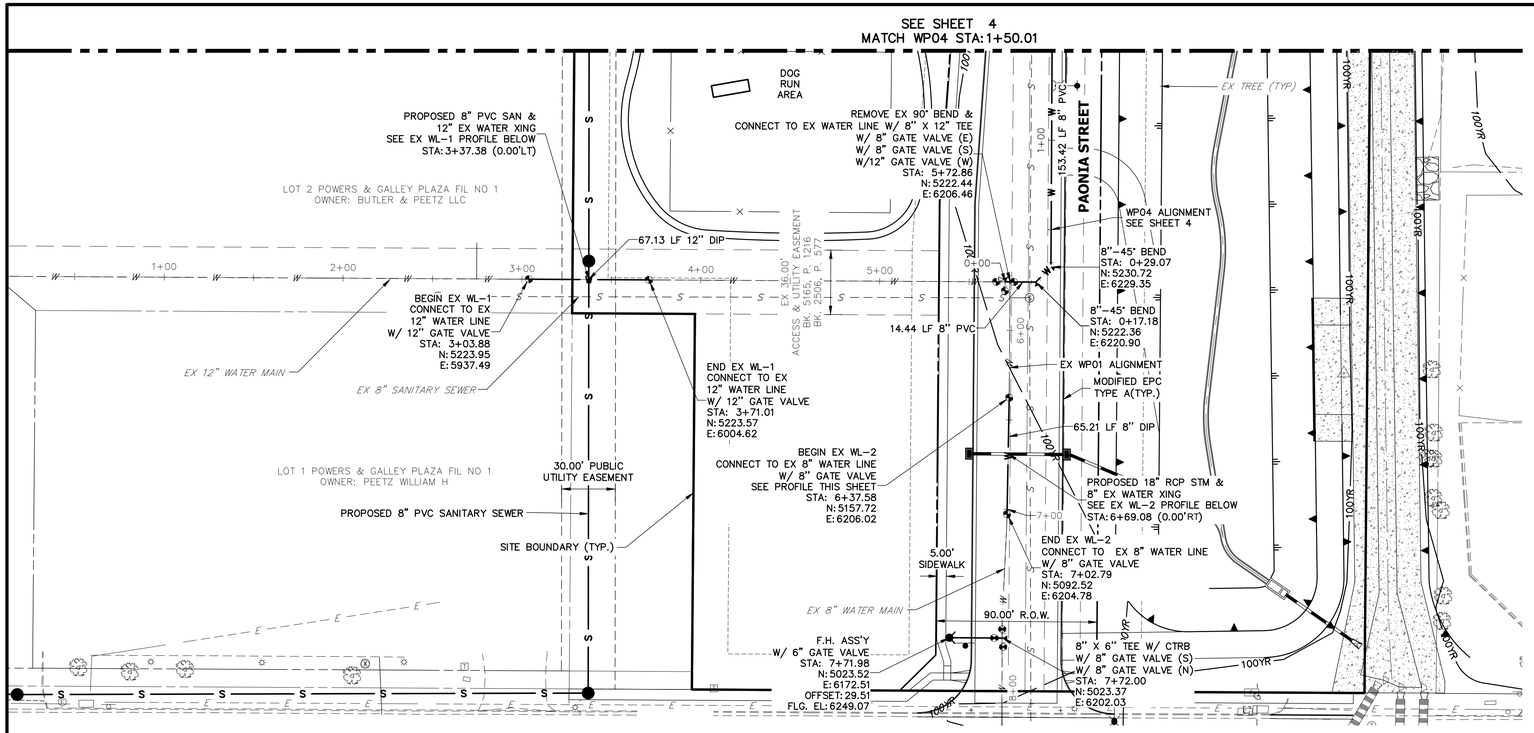
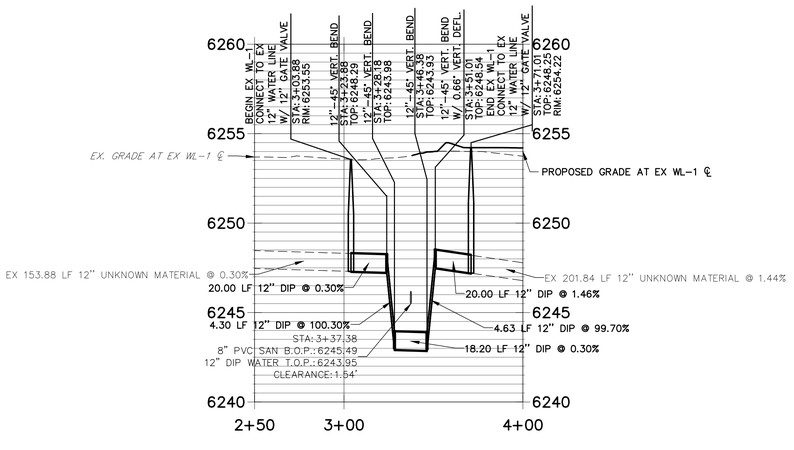
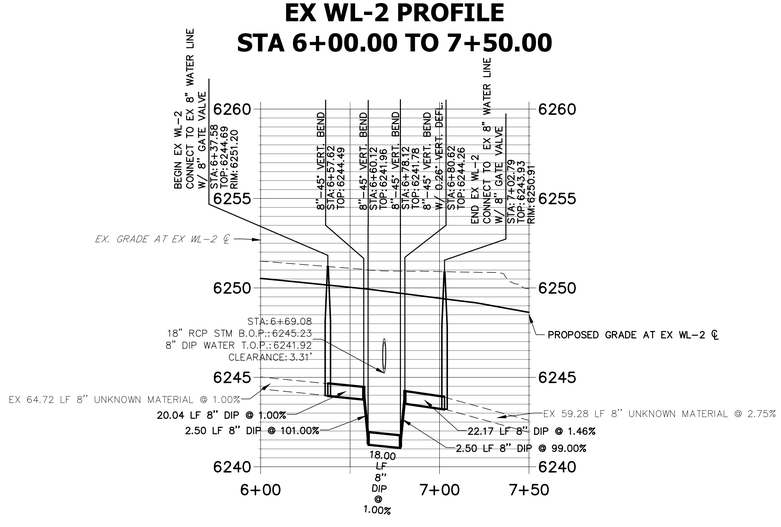
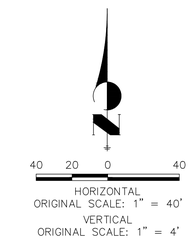


EX WL-1 PROFILE
STA 2+50.00 TO 4+00.00



EX WL-2 PROFILE
STA 6+00.00 TO 7+50.00





WATER NOTES:

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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PREPARED FOR
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No.	REVISION	BY	DATE

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V-SCALE	1"=4'
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DRAWN BY	APL
CHECKED BY	

SOLACE APARTMENTS

WATER DISTRIBUTION PLAN

SHEET 3 OF 9

JOB NO. 25174.00

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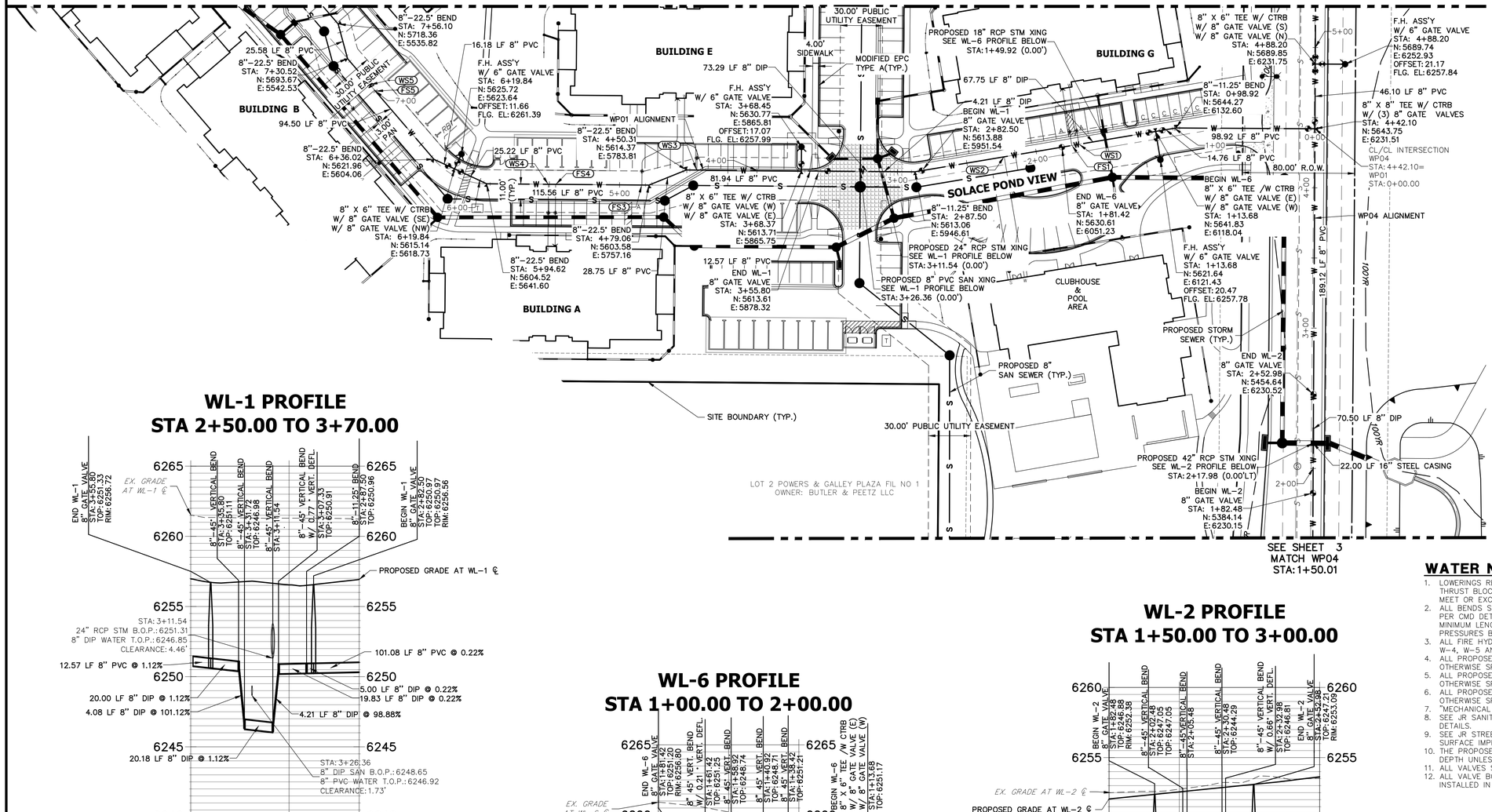
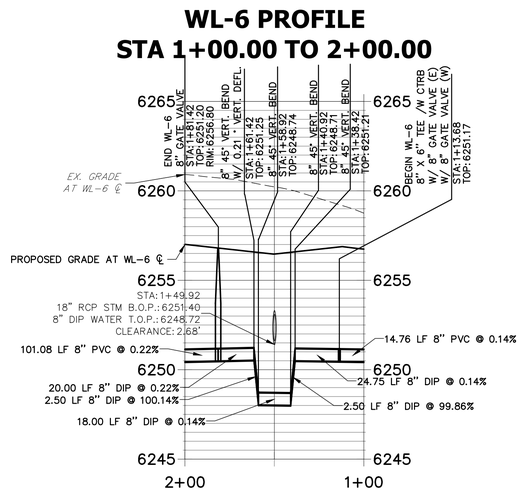


WL-1 PROFILE
STA 2+50.00 TO 3+70.00

WL-6 PROFILE
STA 1+00.00 TO 2+00.00



WL-2 PROFILE
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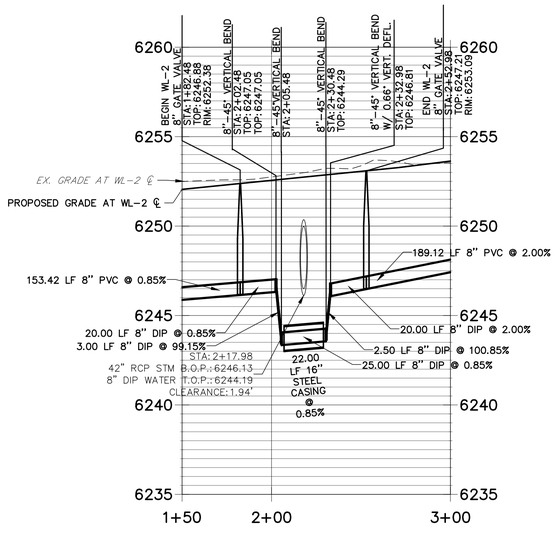

UTILITY SERVICE TABULATION			
SERVICE	STATION	ALIGNMENT	DESCRIPTION
FS1	1+74.21	WP01	FIRE SERVICE
FS3	4+84.06	WP01	FIRE SERVICE
FS5	7+00.00	WP01	FIRE SERVICE
WS1	1+69.04	WP01	POTABLE WATER SERVICE
WS3	4+42.81	WP01	POTABLE WATER SERVICE
WS5	7+06.10	WP01	POTABLE WATER SERVICE

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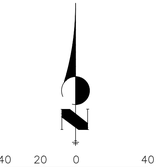

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

Know what's below. Call before you dig.

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No.	REVISION	BY	DATE

H-SCALE 1"=40' | V-SCALE 1"=4' | DATE 11/25/20 | DESIGNED BY APL | DRAWN BY APL | CHECKED BY

SOLACE APARTMENTS
WATER DISTRIBUTION PLAN

SHEET 4 OF 9

JOB NO. 25174.00

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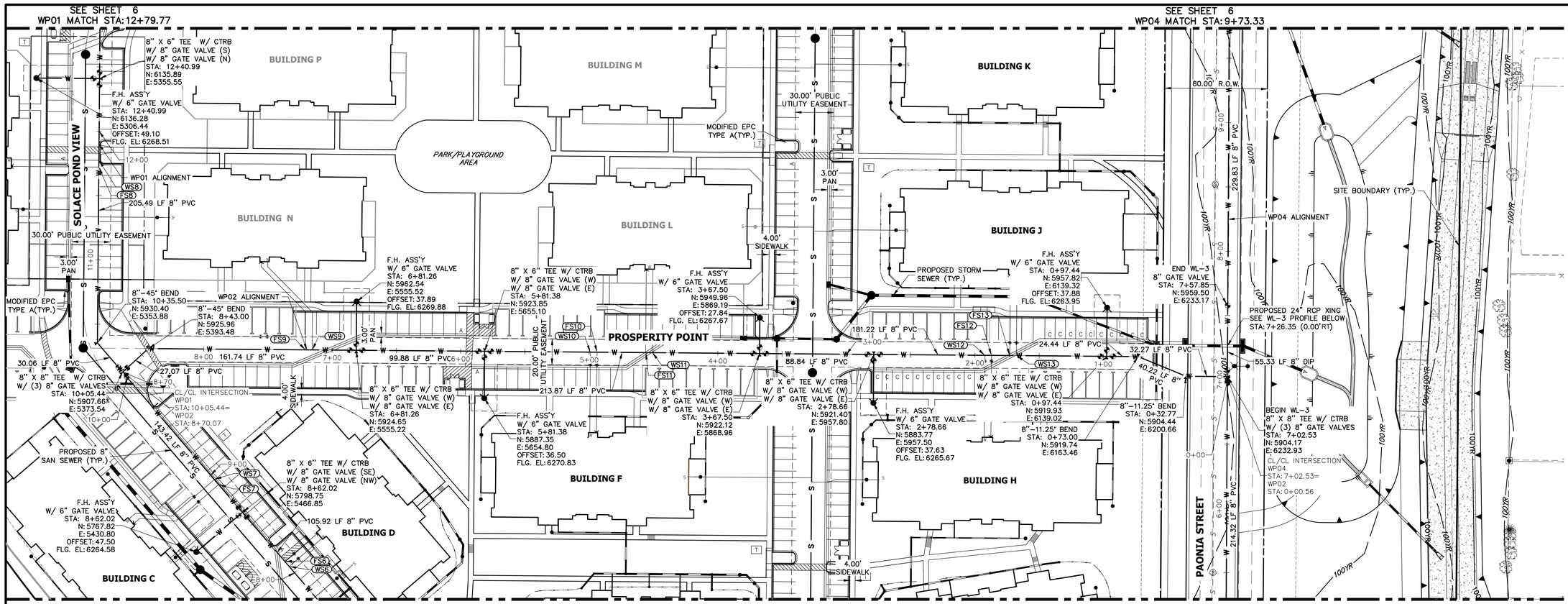
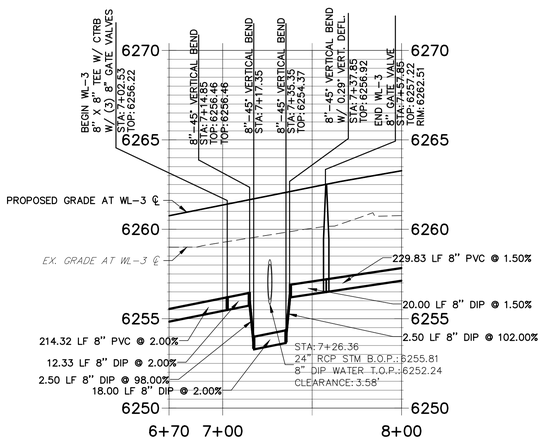


UTILITY SERVICE TABULATION			
SERVICE	STATION	ALIGNMENT	DESCRIPTION
FS6	8+11.59	WP01	FIRE SERVICE
FS7	8+90.48	WP01	FIRE SERVICE
FS8	11+72.18	WP01	FIRE SERVICE
FS9	7+20.76	WP02	FIRE SERVICE
FS10	4+93.91	WP02	FIRE SERVICE
FS12	1+87.03	WP02	FIRE SERVICE
FS13	1+72.89	WP02	FIRE SERVICE
WS6	8+06.43	WP01	POTABLE WATER SERVICE
WS7	8+95.60	WP01	POTABLE WATER SERVICE
WS8	11+77.42	WP01	POTABLE WATER SERVICE
WS9	7+15.59	WP02	POTABLE WATER SERVICE
WS10	4+99.08	WP02	POTABLE WATER SERVICE
WS12	1+92.20	WP02	POTABLE WATER SERVICE
WS13	1+67.73	WP02	POTABLE WATER SERVICE

WL-3 PROFILE
STA 6+70.00 TO 8+00.00



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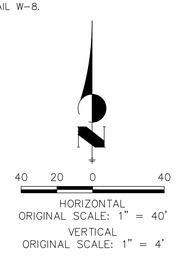

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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DRAWN BY	APL		
CHECKED BY			

SOLACE APARTMENTS

WATER DISTRIBUTION PLAN

SHEET 5 OF 9

JOB NO. 25174.00

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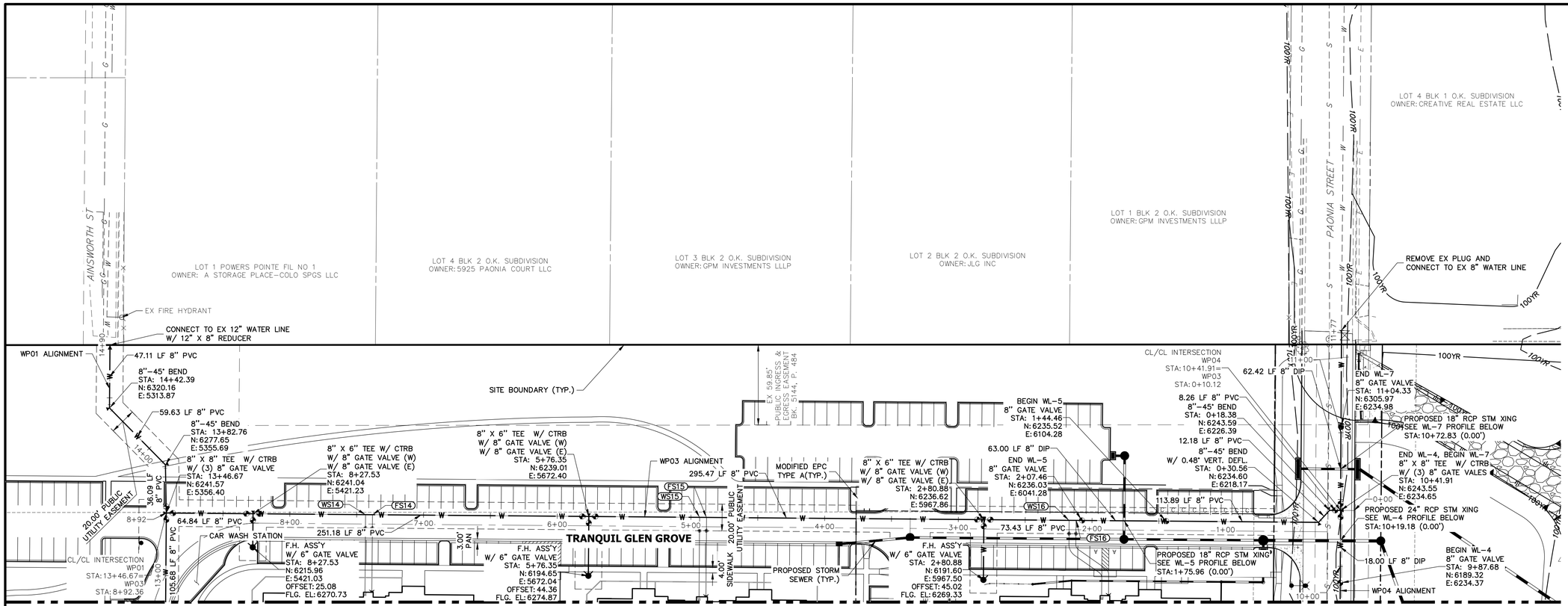

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UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS STREET, SUITE 400
CHICAGO, IL 60607
ATTN: DANE OLMSTEAD
(734)216-2577
DOLMSTEAD@JACKSONDEARBORN.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

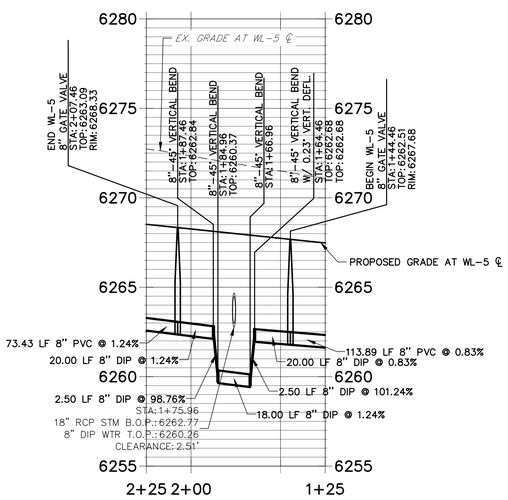
No.	REVISION	BY	DATE

H–SCALE 1"=40'
V–SCALE 1"=4'
DATE 11/25/20
DESIGNED BY APL
DRAWN BY APL
CHECKED BY

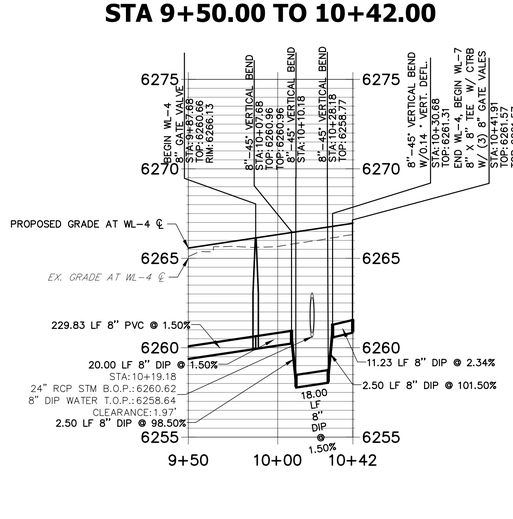
SOLACE APARTMENTS
WATER DISTRIBUTION PLAN

SHEET 6 OF 9
JOB NO. 25174.00

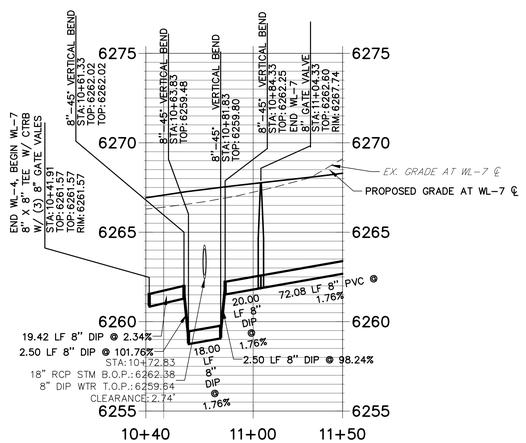
WL-5 PROFILE
STA 1+25.00 TO 2+25.00



WL-4 PROFILE
STA 9+50.00 TO 10+42.00



WL-7 PROFILE
STA 10+40.00 TO 11+50.00



WATER NOTES:

1. LOWERINGS REQUIRE CONCRETE REVERSE ANCHORS (CRA) AND CONCRETE THRUST BLOCKS (CTRB) PER CMD DETAIL W–20. ALL LOWERINGS SHALL MEET OR EXCEED CMD CRITERIA AND DETAIL W–20
2. ALL BENDS SHALL BE RESTRAINED W/ MECHANICAL JOINT RESTRAINTS (MJR) PER CMD DETAIL W–27. REQUIRED RESTRAINT LENGTHS SHALL MEET MINIMUM LENGTHS PUBLISHED IN CMD DETAIL W–28 FOR MAXIMUM STATIC PRESSURES BETWEEN 100 AND 200 PSI.
3. ALL FIRE HYDRANT ASSEMBLIES SHALL BE CONSTRUCTED PER CDM DETAILS W–4, W–5 AND W–6.
4. ALL PROPOSED WATER LINES AND STRUCTURES ARE PUBLIC, UNLESS OTHERWISE SPECIFIED.
5. ALL PROPOSED SANITARY LINES AND STRUCTURES ARE PUBLIC, UNLESS OTHERWISE SPECIFIED.
6. ALL PROPOSED STORM LINES AND STRUCTURES ARE PRIVATE, UNLESS OTHERWISE SPECIFIED.
7. "MECHANICAL JOINT RESTRAINTS" IS ABBREVIATED AS "MJR"
8. SEE JR SANITARY SEWER PLANS FOR SANITARY SEWER DESIGN AND DETAILS.
9. SEE JR STREET, STORM, POND AND GESC PLANS FOR PROPOSED GRADING, SURFACE IMPROVEMENTS AND STORMWATER SYSTEM DESIGN.
10. THE PROPOSED WATER LINES SHALL BE INSTALLED AT CMD STANDARD DEPTH UNLESS OTHERWISE SHOWN.
11. ALL VALVES SHALL BE INSTALLED PER CMD DETAIL W–7.
12. ALL VALVE BOXES SHALL BE SET TO THE FINISHED GRADE AND BE INSTALLED IN ACCORDANCE WITH CMD DETAIL W–8.

UTILITY SERVICE TABULATION

SERVICE	STATION	ALIGNMENT	DESCRIPTION
FS14	7+38.18	WP03	FIRE SERVICE
FS15	4+88.32	WP03	FIRE SERVICE
FS16	2+11.96	WP03	FIRE SERVICE
WS14	7+43.35	WP03	POTABLE WATER SERVICE
WS15	4+93.48	WP03	POTABLE WATER SERVICE
WS16	2+17.12	WP03	POTABLE WATER SERVICE

N

40 20 0 40
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT

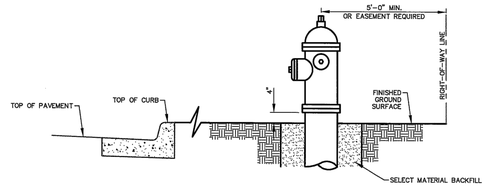
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO MIKE A. BRAMLETT 32314 REGISTERED PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

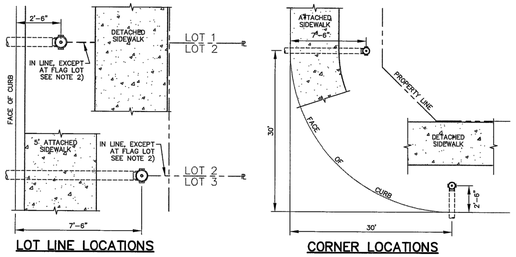
DATE

X:\25\10000.all\25174.00\Drawings\Sheet Dwgs\Water Utility\25174.00WP01.dwg, WP04, 11/25/2020 8:17:45 AM, CS



GENERAL NOTES:

1) HYDRANT NOZZLE SHALL BE POSITIONED AT RIGHT ANGLES TO THE CURB. IF NO CURB OR SIDEWALK EXISTS, NOZZLE SHALL BE PLACED AT RIGHT ANGLES TO STREET OR ALLEY.
2) HYDRANTS INSTALLED AT FLAG LOT LINES SHALL BE OFFSET 3' FROM THE LOT LINE(AWAY FROM STEM).
3) HYDRANTS WILL BE PLACED A MINIMUM OF 5.0 FT. FROM ANY UTILITY OR DRAINAGE STRUCTURE.
4) EASEMENTS MUST BE PROVIDED FOR ANY PUBLIC HYDRANT WHICH IS CLOSER THAN 5.0 FT TO THE RIGHT-OF-WAY LINE.
5) ANY HYDRANTS BEING INSTALLED WITH CONDITIONS OTHER THAN THOSE MENTIONED AND/OR DETAILED BELOW WILL REQUIRE SIGNED APPROVAL FROM THE CHEROKEE METROPOLITAN DISTRICT AND THE FIRE DEPARTMENT.

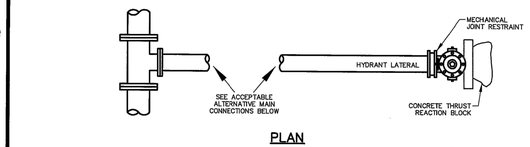


CHEROKEE METROPOLITAN DISTRICT

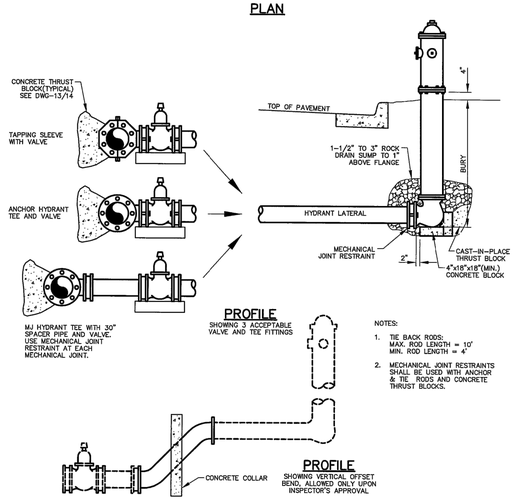
FIRE HYDRANT LOCATIONS

DRAWN: TJM	REVISED:	
DATE: MAY 2107	REVISED:	
SCALE: NONE	REVISED:	DRAFT

W-4



PLAN



PROFILE
SHOWING 3 ACCEPTABLE VALVE AND TEE FITTINGS

NOTES:
1. TIE BACK RODS: MAX. ROD LENGTH = 10' MIN. ROD LENGTH = 4'
2. MECHANICAL JOINT RESTRAINTS SHALL BE USED WITH ANCHOR & TIE RODS AND CONCRETE THRUST BLOCKS.

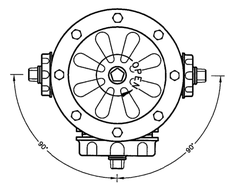
PROFILE
SHOWING VERTICAL OFFSET BEND, ALLOWED ONLY UPON INSPECTOR'S APPROVAL

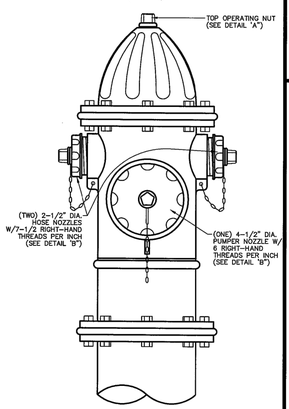
CHEROKEE METROPOLITAN DISTRICT

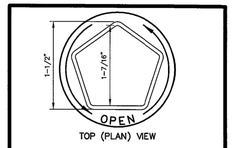
FIRE HYDRANT INSTALLATION

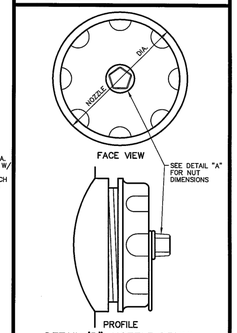
DRAWN: TJM	REVISED:	
DATE: MAY 2017	REVISED:	
SCALE: NONE	REVISED:	DRAFT

W-5







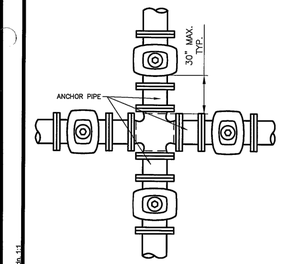


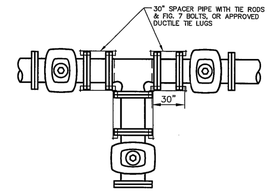
CHEROKEE METROPOLITAN DISTRICT

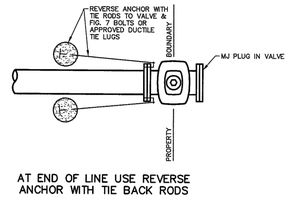
FIRE HYDRANT SPECIFICATIONS

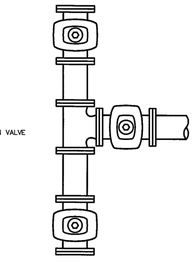
DRAWN: TJM	REVISED:	
DATE: MAY 2017	REVISED:	
SCALE: NONE	REVISED:	DRAFT

W-6









GENERAL NOTES:

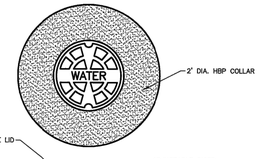
1. ON ANY VALVE INSTALLATION NEAR A FITTING, THE VALVE SHALL BE ANCHORED BY RODS. REVERSE ANCHOR AND MECHANICAL JOINT RESTRAINTS. 3/4" ALL-THREAD RODS SHALL BE USED WITH FIG. 7 BOLTS OR APPROVED DUCTILE TIE LUGS FOR DEAD END VALVES AND FOR PLUGS. ALL METALLIC COMPONENTS SHALL BE WRAPPED IN POLYETHYLENE TUBING.
2. ANCHOR PIPE OR FOSTER COUPLINGS MAY BE SUBSTITUTED FOR SPACER PIPE AND RODS.
3. THE CONCRETE REVERSE ANCHORS USED SHALL BE SIZED AS INDICATED ON 18.
4. SEE 27 & 28 FOR APPLICATION OF MECHANICAL JOINT RESTRAINTS.
5. SEE 8 FOR VALVE BOX INSTALLATION.

CHEROKEE METROPOLITAN DISTRICT

VALVE INSTALLATION & LOCATION

DRAWN: TJM	REVISED:	
DATE: MAY 2017	REVISED:	
SCALE: NONE	REVISED:	DRAFT

W-7



NOTE:

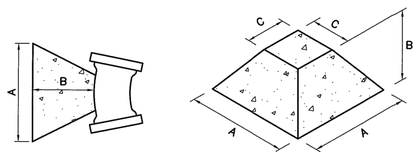
1. SLIP TYPE 5-1/4" I.D. SHAFT TYLER PIPE SERIES 664-A OR EQUIVALENT APPROVED BY THE DISTRICT.
2. MAIN AND FIRE HYDRANT VALVES AND VALVE BOXES SHALL BE LOCATED IN AND UNDER THE DRIVING SURFACE OF THE STREET-NOT IN THE CURB PAN, CURB OR BEHIND THE CURB.
3. SEE 12 FOR TRACER WIRE INSTALLATION AT VALVE BOXES.

CHEROKEE METROPOLITAN DISTRICT

VALVE BOX INSTALLATION

DRAWN: TJM	REVISED:	
DATE: MAY 2017	REVISED:	
SCALE: NONE	REVISED:	DRAFT

W-8



NOTE: USE THE FOLLOWING VALUES FOR 'C'

PIPE SIZE =	C =
12" & UNDER	1'-6"
16" TO 24"	2'-0"
30" TO 36"	3'-0"

OVER 36" A, B & C WILL BE GIVEN IN EACH INSTANCE

VOL. (yds)	A	B If C=1'-6"	B If C=2'-0"	B If C=3'-0"
1/8	2'-6"	0'-10"	1/8	1/8
1/4	2'-8"	1'-7"	1/8	1/8
1/2	3'-2"	2'-5"	2'-0"	1/8
3/4	4'-0"	2'-6"	2'-5"	1/8
1	4'-4"	3'-0"	2'-7"	2'-0"
1 1/4	4'-10"	3'-1"	2'-9"	2'-2"
1 1/2	5'-3"	3'-3"	2'-11"	2'-4"
1 3/4	5'-7"	3'-5"	3'-1"	2'-6"
2	5'-10"	3'-7"	3'-3"	2'-8"
2 1/4	6'-3"	3'-8"	3'-4"	2'-9"
2 1/2	6'-4"	3'-11"	3'-7"	3'-0"
2 3/4	6'-9"	3'-11"	3'-7"	3'-0"
3	6'-10"	4'-1"	3'-9"	3'-2"
3 1/4	7'-3"	4'-1"	3'-9"	3'-2"
3 1/2	7'-4"	4'-3"	3'-11"	3'-4"
3 3/4	7'-7"	4'-4"	4'-0"	3'-5"
4	7'-11"		4'-0"	3'-5"
4 1/4	8'-1"		4'-0"	3'-8"
4 1/2	8'-4"		4'-0"	3'-8"
4 3/4	8'-8"		4'-1"	3'-7"

VOL. (yds)	A	B If C=1'-6"	B If C=2'-0"	B If C=3'-0"
5	8'-8"		4'-2"	3'-8"
5 1/4	8'-11"		4'-2"	3'-8"
5 1/2	9'-1"		4'-3"	3'-9"
5 3/4	9'-3"		4'-4"	3'-10"
6	9'-4"		4'-5"	3'-11"
6 1/4	9'-6"		4'-6"	4'-0"
6 1/2	9'-8"		4'-6"	4'-0"
6 3/4	9'-11"		4'-6"	4'-0"
7	10'-2"		4'-6"	4'-0"
7 1/4	10'-3"		4'-7"	4'-1"
7 1/2	10'-4"		4'-8"	4-2"
7 3/4	10'-5"		4'-9"	4'-3"
8	10'-6"		4'-10"	4'-4"
8 1/4	10'-8"		4'-10"	4'-4"
8 1/2	10'-9"		4'-11"	4'-5"
8 3/4	10'-11"		4'-11"	4'-5"
9	11'-1"		4'-11"	4'-5"
9 1/4	11'-2"		5'-0"	4'-6"
9 1/2	11'-4"		5'-0"	4'-6"
9 3/4	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	1/6 yd.	1/2 yd.	3/4 yd.	2 yd.
90° BEND	1/6 yd.	3/4 yd.	1 1/4 yd.	3 yd.
45° BEND	1/6 yd.	1/2 yd.	3/4 yd.	1 1/2 yd.
22-1/2° BEND	1/6 yd.	1/6 yd.	1/4 yd.	3/4 yd.
11-1/4° BEND	1/6 yd.	1/6 yd.	1/6 yd.	1/4 yd.

CHEROKEE METROPOLITAN DISTRICT

THRUST BLOCK DATA

DRAWN: TJM	REVISED:	
DATE: MAY 2017	REVISED:	
SCALE: NONE	REVISED:	DRAFT

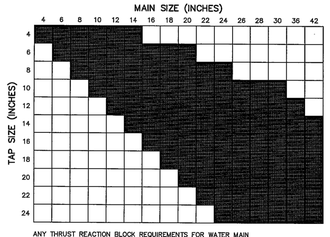
W-13

CONCRETE THRUST BLOCKS

WATER MAIN AND TAP SIZE COMBINATIONS WHICH REQUIRE A CONCRETE THRUST REACTION BLOCK BEHIND THE MAIN AT THE TAPPING SLEEVE OR SADDLE.

ALL WATER MAINS

INDICATES CONCRETE THRUST BLOCK REQUIRED



ANY THRUST REACTION BLOCK REQUIREMENTS FOR WATER MAIN AND TAP SIZE COMBINATIONS OTHER THAN THOSE SHOWN ABOVE WILL REQUIRE SPECIAL DESIGN APPROVAL BY THE CHEROKEE METROPOLITAN DISTRICT.

CHEROKEE METROPOLITAN DISTRICT

THRUST BLOCKS REQUIRED FOR TAPS

DRAWN: TJM	REVISED:	
DATE: MAY 2017	REVISED:	
SCALE: NONE	REVISED:	DRAFT

W-14

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS STREET, SUITE 400
CHICAGO, IL 60607
ATTN: DANE OLMSTEAD
(734)216-2577
DOLMSTEAD@JACKSONDEARBORN.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	11/25/20
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

SOLACE APARTMENTS

DETAIL SHEETS

SHEET 7 OF 9

JOB NO. 25174.00

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MAXIMUM DEFLECTION
PER SLIP JOINT OF D.I.P.

PIPE DIAMETER			MFRS. DEFL.	DESIGN DEFLECTION (80% MAX.)			APPROX. RADIUS FOR DEFLECTING CURVES WITHOUT BENDS	
					MAX. DEFL. DIST.			
I.D.	O.D.(IN.)	O.D.(FT.)			(1)	(2)	20'L	18'L
4"	4.80"	.400'	5°00'00"	4°00'00"	16"	15"	286'	258'
6"	6.90"	.575'	5°00'00"	4°00'00"	16"	15"	286'	258'
8"	9.05"	.754'	5°00'00"	4°00'00"	16"	15"	286'	258'
10"	11.10"	.925'	5°00'00"	4°00'00"	16"	15"	286'	258'
12"	13.20"	1.100'	5°00'00"	4°00'00"	16"	15"	286'	258'
14"	15.30"	1.275'	3°00'00"	2°24'00"	10"	9"	477'	430'
16"	17.40"	1.450'	3°00'00"	2°24'00"	10"	9"	477'	430'
18"	19.50"	1.625'	3°00'00"	2°24'00"	10"	9"	477'	430'
20"	21.60"	1.800'	3°00'00"	2°24'00"	10"	9"	477'	430'
24"	25.80"	2.150'	3°00'00"	2°24'00"	10"	9"	477'	430'
30"	32.00"	2.666'	2°30'00"	2°00'00"	8"	7"	573'	516'
36"	38.30"	3.192'	2°00'00"	1°36'00"	6"	6"	716'	645'
42"	44.50"	3.708'	2°00'00"	1°36'00"	6"	6"	716'	645'

(1) 20'L = NORMAL 20-FOOT JOINT LAYING LENGTH
(2) 19'L = NORMAL 18-FOOT JOINT LAYING LENGTH

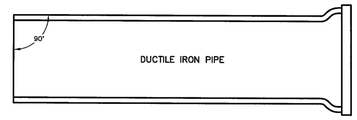
CHEROKEE METROPOLITAN DISTRICT

MAXIMUM PIPELINE DEFLECTION DATA

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

DRAFT

W-16



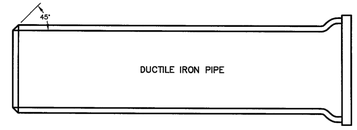
MECHANICAL JOINT CONNECTION

PIPE MUST BE CUT AT RIGHT ANGLES TO LONGITUDINAL CENTERLINE IN ALL CASES.

PIPE ENDS SHALL BE FREE OF BURRS.

MORTAR LINING SHALL BE FLUSH WITH PIPE END.

GOUGES CUT IN PIPE ENDS SHALL NOT BE ALLOWED.



SLIP JOINT CONNECTION

PIPE CUT IN STRAIGHT LINE AND BEVELED AT 45° ANGLE ON END.

GENERAL NOTES:

1. ALL PIPE CUTTING EQUIPMENT AND PIPE CUTS MUST BE APPROVED BY THE CHEROKEE METROPOLITAN DISTRICT INSPECTOR.
2. ALL PIPE ENDS TO BE USED IN INSTALLATION SHALL BE DRESSED SMOOTH TO THE SATISFACTION OF THE INSPECTOR PRIOR TO INSTALLATION.
3. AT THE REQUEST OF THE CONTRACTOR MAKING THE INSTALLATION, THE DISTRICT WILL MAKE PIPE CUTS, PROVIDING THE CURRENT FEE PER CUT IS PAID AND 24-HOUR NOTICE IS GIVEN (THE CURRENT FEE IS SUBJECT TO CHANGE.)
4. ALL DIP DELIVERED TO JOB SITE MUST BE NEW MATERIAL.

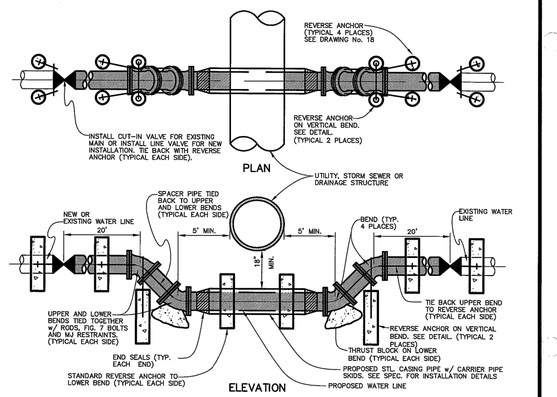
CHEROKEE METROPOLITAN DISTRICT

PIPE CUTTING

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

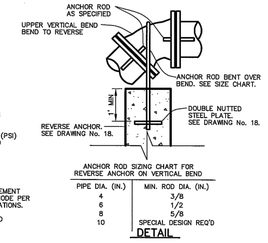
DRAFT

W-17



GENERAL NOTES:

1. NO PVC PIPE ALLOWED IN LOWERINGS.
2. LOWERINGS TO BE PROTECTED FROM CORROSION AS DIRECTED BY INSPECTOR.
3. A CASING PIPE IS NOT REQUIRED WHEN THE DRAINAGE STRUCTURE IS 30 INCHES OR LESS OUTSIDE DIAMETER.
4. FURNISH AND INSTALL STEEL CASING PIPE WITH CARRIER PIPE SKIDS (PSI) AND END SEALS WHERE THE DRAINAGE STRUCTURE IS MORE THAN 30 INCHES OUTSIDE DIAMETER, MAINTAIN 18 INCHES CLEAR BETWEEN STRUCTURE AND CASING PIPE.
5. FURNISH AND INSTALL ONE-17LB. MAGNESIUM ANODE PER 20-FOOT OR LESS OF CASING PIPE. ATTACH TO CASING PIPE NEAR END SEAL.
6. FURNISH AND INSTALL JOINT BONDING, POLYETHYLENE TUBING/ENCASEMENT AND 17LB. MAGNESIUM ANODE ON DIP IN LOWERING. PROVIDE ONE ANODE PER 20-FOOT OR LESS OF DIP INSTALLED. REFER TO STANDARD SPECIFICATIONS.
7. EBBA IRON 1600 (OR EQUAL) MECHANICAL JOINT RESTRAINT REQUIRED ON ALL JOINTS INSIDE CASING PIPE.



ANCHOR ROD SIZING CHART FOR REVERSE ANCHOR ON VERTICAL BEND

PIPE DIA. (IN.)	MIN. ROD DIA. (IN.)
4	3/8
6	1/2
8	5/8
10	SPECIAL DESIGN REQ'D

DETAIL

CHEROKEE METROPOLITAN DISTRICT

WATER LINE LOWERING DETAIL

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

DRAFT

W-20

RESTRAINED PIPE LENGTH (FT)

6-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI)		
	<100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	31	47	62
45° BEND	13	19	25
22-1/2° BEND	6	8	11
11-1/4° BEND	3	5	6

8-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI)		
	<100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	39	58	78
45° BEND	17	24	33
22-1/2° BEND	8	12	16
11-1/4° BEND	5	6	8

12-INCH DUCTILE IRON ONLY

TYPE OF FITTING	STATIC PRESSURE (PSI)		
	<100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	56	84	112
45° BEND	23	35	47
22-1/2° BEND	11	17	22
11-1/4° BEND	6	8	11

NOTES:

1. PRESSURES GREATER THAN 200 PSI REQUIRE SPECIAL DESIGN APPROVED BY THE DISTRICT.
2. LENGTH IS BASED ON MINIMUM 5'-0" OF GROUND COVER AND SOIL COMPACTED ACCORDING TO SECTION 5.15 OF THESE SPECIFICATIONS.
3. APPROVED METHODS OF RESTRAINED PIPE BEYOND INITIAL FITTING SHALL BE:
   A. FOR DUCTILE IRON PIPE, 1100 SERIES MEGALUG BY EBAA IRON OR EQUAL ON MECHANICAL JOINT PIPE OR DOUBLE 1100 SERIES MEGALUG BY EBAA IRON OR EQUAL ON PUSH ON JOINT PIPE.
   B. FOR PVC PIPE, SERIES 1500 OR SERIES 2800 RESTRAINTS BY EBAA IRON OR EQUAL.

CHEROKEE METROPOLITAN DISTRICT

RESTRAINED M.J. PIPE LENGTH DATA

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

DRAFT

W-28

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
JACKSON DEARBORN PARTNERS
404 S. WELLS STREET, SUITE 400
CHICAGO, IL 60607
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(734)216-2577
DOLMSTEAD@JACKSONDEARBORN.COM

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

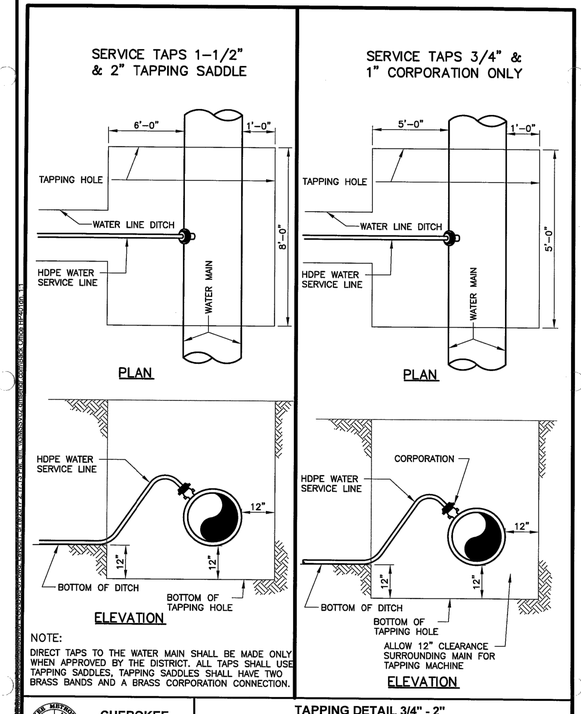
H-SCALE	N/A	DESIGNED BY	APL
V-SCALE	N/A	DRAWN BY	APL
DATE	11/25/20	CHECKED BY	

SOLACE APARTMENTS

DETAIL SHEETS

SHEET 8 OF 9

JOB NO. 25174.00



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.

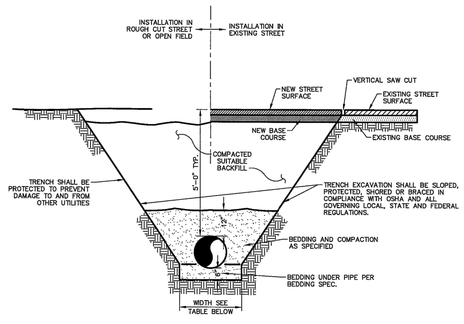
CHEROKEE METROPOLITAN DISTRICT

TAPPING DETAIL 3/4" - 2"

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

DRAFT

W-37



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"
16"	2'-6"	4'-9"
20"	2'-10"	5'-2"
24"	3'-2"	5'-6"

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 FIRST TO PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER.

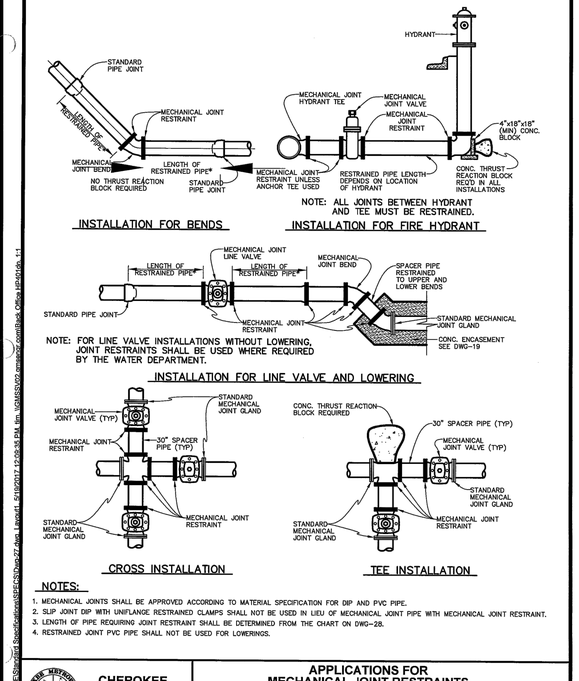
CHEROKEE METROPOLITAN DISTRICT

TYPICAL TRENCH CROSS SECTION

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

DRAFT

W-15



CROSS INSTALLATION

TEE INSTALLATION

NOTES:

1. MECHANICAL JOINTS SHALL BE APPROVED ACCORDING TO MATERIAL SPECIFICATION FOR DIP AND PVC PIPE.
2. SLIP JOINT DIP WITH UNIFLANGE RESTRAINED CLAMPS SHALL NOT BE USED IN LIEU OF MECHANICAL JOINT PIPE WITH MECHANICAL JOINT RESTRAINT.
3. LENGTH OF PIPE REQUIRING JOINT RESTRAINT SHALL BE DETERMINED FROM THE CHART ON DWG-28.
4. RESTRAINED JOINT PVC PIPE SHALL NOT BE USED FOR LOWERINGS.

CHEROKEE METROPOLITAN DISTRICT

APPLICATIONS FOR MECHANICAL JOINT RESTRAINTS

DRAWN: TJM | REVISED:
DATE: MAY 2017 | REVISED:
SCALE: NONE | REVISED:

DRAFT

W-27

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

ENGINEER'S STATEMENT

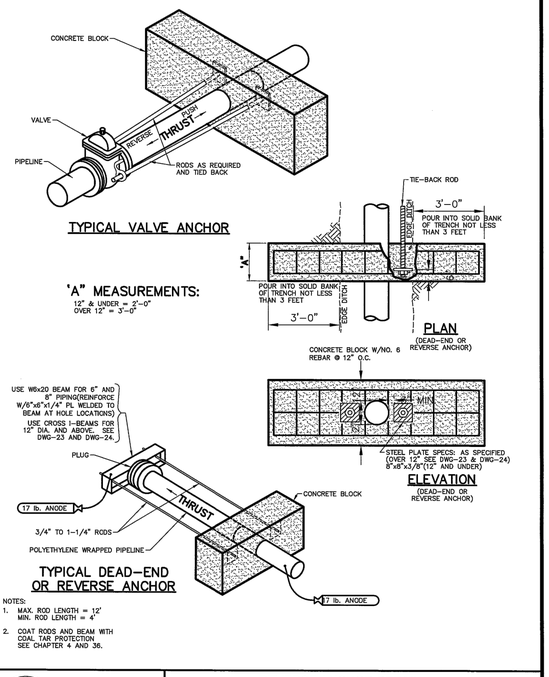
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

X:\25\10000.all\25174000\Drawings\Sheet Dwgs\Water Utility\25174000T01.dwg, DT02, 11/25/2020 8:18:14 AM, CS



CHEROKEE METROPOLITAN DISTRICT	REVERSE ANCHOR DETAIL		
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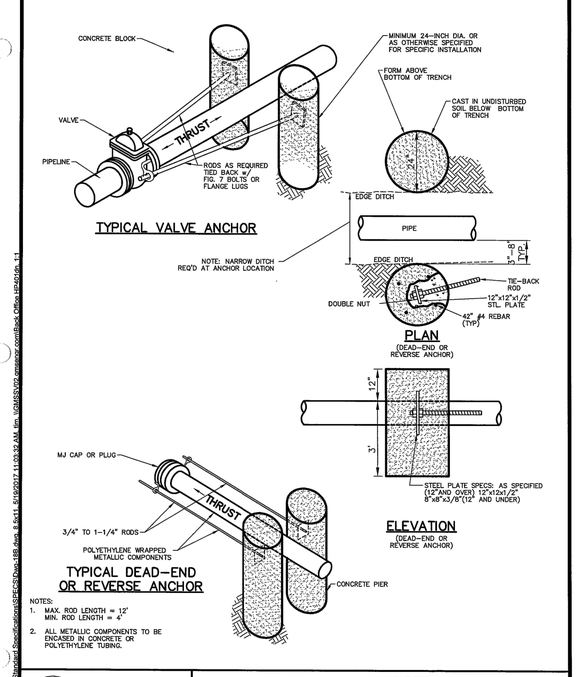
	DATE: MAY 2017	REVISED:	
	SCALE: NONE	REVISED:	

DRAFT



CHEROKEE METROPOLITAN DISTRICT	REVERSE ANCHOR DETAIL		
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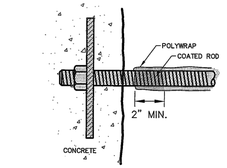
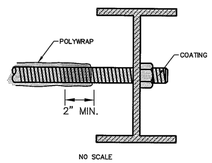
	DATE: MAY 2017	REVISED:	
	SCALE: NONE	REVISED:	

DRAFT



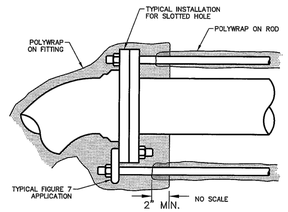
METAL IN CONCRETE:

1. COAT METAL PARTS WHERE IN CONTACT WITH CONCRETE, EXTENDING COATING SEVERAL INCHES BEYOND THE CONCRETE.
2. POLYWRAP THE ROD, OVERLAPPING THE POLYWRAP AND THE COATING A MINIMUM OF 2".
3. SECURE POLYWRAP TO THE ROD USING 2" WIDE, 10-MIL POLYETHYLENE PRESSURE-SENSITIVE TAPE.



ROD THROUGH I-BEAM:

1. COAT ENTIRE I-BEAM.
2. COAT NUT AND ROD, EXTENDING COATING SEVERAL INCHES BEYOND THE BEAM.
3. POLYWRAP THE ROD, OVERLAPPING THE COATING A MINIMUM OF 2".
4. SECURE POLYWRAP WITH TAPE.



RODS IN MJ FITTING:

1. POLYWRAP THE ROD AND SECURE WITH TAPE.
2. POLYWRAP THE FITTING, OVERLAPPING THE POLYWRAP ON THE ROD A MINIMUM OF 2" AND SECURE WITH TAPE.

CHEROKEE METROPOLITAN DISTRICT	PROTECTING TIE-RODS		
	DRAWN: TJM	REVISED:	W-36
	DATE: MAY 2017	REVISED:	
	SCALE: NONE	REVISED:	

DRAFT

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR

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CHICAGO, IL 60607
ATTN: DANE OLMSTEAD
(734)216-2577
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No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	11/25/20
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

SOLACE APARTMENTS

DETAIL SHEETS

SHEET 9 OF 9

JOB NO. 25174.00

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

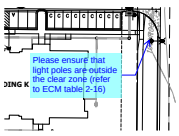
MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER

X:\25\10000.all\25174\00\Drawings\Sheet Dwgs\Water Utility\25174000T01.dwg, DT03, 11/25/2020 8:18:21 AM, CS

Construction Drawings -PlansProfiles_V1.pdf Markup Summary

Daniel Torres (12)



Subject: Callout
Page Label: [3] 3 2517400UT01 - UT01
Author: Daniel Torres
Date: 1/31/2021 4:38:59 PM
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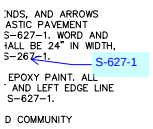
Please ensure that light poles are outside the clear zone (refer to ECM table 2-16)



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Page Label: [2] 2 2517400CV01 - LG01
Author: Daniel Torres
Date: 2/1/2021 4:34:52 PM
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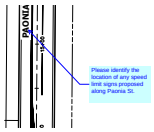
S-627-1



Subject: Callout
Page Label: [27] 27 2517400-SG01 - Phase 1 (north)
Author: Daniel Torres
Date: 2/1/2021 8:09:15 PM
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Layer:
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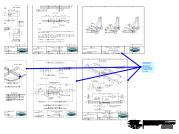
Please identify the location of any speed limit signs proposed along Paonia St.



Subject: Callout
Page Label: [29] 29 2517400DT01 - DT01
Author: Daniel Torres
Date: 2/1/2021 8:14:18 PM
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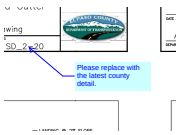
Space:

Please provide the latest PED ramp details (SD_2-40 through 2-42 & SD_2-50) that were recently revised with the adoption of CH6 to the ECM.



Subject: Callout
Page Label: [29] 29 2517400DT01 - DT01
Author: Daniel Torres
Date: 2/1/2021 8:15:26 PM
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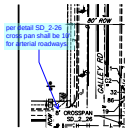
Color:
Layer:
Space:

Please replace with the latest county detail.



Subject: Callout
Page Label: [32] 32 2517400DT01 - DT01 (4)
Author: Daniel Torres
Date: 2/1/2021 8:26:28 PM
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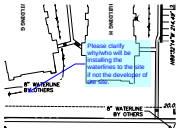
Color:
Layer:
Space:

per detail SD_2-26 cross pan shall be 10' for arterial roadways.



Subject: Callout
Page Label: [32] 32 2517400DT01 - DT01 (4)
Author: Daniel Torres
Date: 2/1/2021 8:29:53 PM
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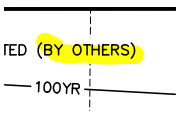
Color:
Layer:
Space:

Please clarify why/who will be installing the waterlines to the site if not the developer of the site.



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Author: Daniel Torres
Date: 2/1/2021 8:49:50 PM
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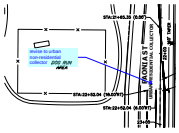
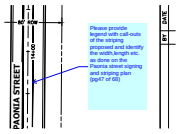


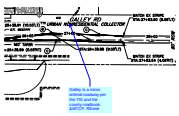
Subject: Callout
Page Label: [32] 32 2517400DT01 - DT01 (4)
Author: Daniel Torres
Date: 2/1/2021 9:01:04 PM
Status:
Color:
Layer:
Space:

revise to urban non-residential collector



Subject: Callout
Page Label: [27] 27 2517400-SG01 - Phase 1 (north)
Author: Daniel Torres
Date: 2/1/2021 9:03:05 PM
Status:
Color:
Layer:
Space:

Please provide legend with call-outs of the striping proposed and identify the width,length etc. as done on the Paonia street signing and striping plan (pg47 of 68)



Subject: Callout
Page Label: [32] 32 2517400DT01 - DT01 (4)
Author: Daniel Torres
Date: 2/1/2021 9:09:47 PM
Status:
Color:
Layer:
Space:

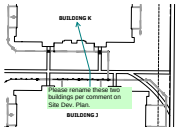
Galley is a minor arterial roadway per the TIS and the county roadbook &MTCP. REvise

---

Subject: Text Box
Page Label: [32] 32 2517400DT01 - DT01 (4)
Author: Daniel Torres
Date: 2/1/2021 9:17:06 PM
Status:
Color:
Layer:
Space:

These are a repeat of the previous details. Please update the details per the previous comments.

Sophie Kiepe (1)



Subject: Architect
Page Label: [3] 3 2517400UT01 - UT01
Author: Sophie Kiepe
Date: 1/11/2021 11:10:33 AM
Status:
Color:
Layer:
Space:

Please rename these two buildings per comment on Site Dev. Plan.