

# 910 28TH STREET APARTMENTS

910 28TH STREET  
BOULDER, CO 80305

## TECHNICAL DOCUMENT AND FINAL SITE PLAN REVIEW

CASE NUMBER TEC 2011-00027

### LEGAL DESCRIPTION

THAT PORTION OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 32, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M., DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 0 DEGREES 00'00" WEST, 20.00 FEET ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE TRUE POINT OF BEGINNING; THENCE NORTH 89 DEGREES 56'00" EAST, 215.00 FEET PARALLEL TO THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 0 DEGREES 01'00" WEST, 80.00 FEET PARALLEL TO THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 89 DEGREES 56'00" WEST, 215.00 FEET PARALLEL TO THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE NORTH 0 DEGREES 01'00" EAST, 80.00 FEET ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE TRUE POINT OF BEGINNING.

#### PARCEL B

TOGETHER WITH A 20.00 FOOT WIDE NON-EXCLUSIVE DRIVEWAY EASEMENT DESCRIBED AS FOLLOWS:

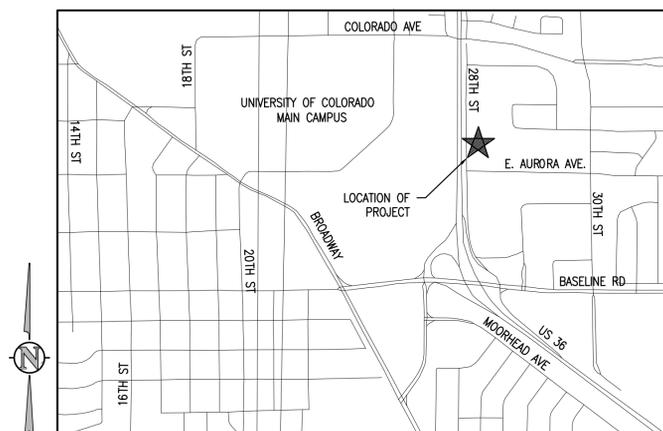
BEGINNING AT THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 0 DEGREES 01'00" WEST, 20.00 FEET ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE NORTH 89 DEGREES 56'00" EAST, 215.00 FEET PARALLEL TO THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE NORTH 0 DEGREES 01'00" EAST, 20.00 FEET PARALLEL TO THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 89 DEGREES 56'00" WEST, 215.00 FEET ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE POINT OF BEGINNING.

#### PARCEL C

TOGETHER WITH AN EASEMENT FOR PURPOSES OF SEWER SERVICE TO THE FOREGOING PROPERTY DESCRIBED AS FOLLOWS:

AN EASEMENT 10.00 FEET IN WIDTH FOR A SEWER LINE, THE WEST END OF SAID EASEMENT ABUTTING THE EAST LINE OF THAT TRACT OF LAND CONVEYED TO ACACIA FRATERNITY INCORPORATED BY DEED RECORDED ON FILM 634, RECEPTION NO. 878346, AND THE SOUTH END OF SAID EASEMENT ABUTTING THE NORTH LINE OF AURORA AVENUE, SAID EASEMENT BEING 5.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE NORTH 89 DEGREES 56'00" EAST, 215.00 FEET ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 0 DEGREES 01'00" WEST, 95.00 FEET PARALLEL TO THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE TRUE POINT OF BEGINNING; THENCE NORTH 89 DEGREES 56'00" EAST, 203.74 FEET TO A POINT ON A LINE THAT IS 5.00 FEET WESTERLY AT RIGHT ANGLES FROM THE WEST LINE OF THE EAST 897.00 FEET OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32; THENCE SOUTH 0 DEGREES 00'40" WEST, 206.45 FEET PARALLEL TO THE WEST LINE OF THE EAST 897.00 FEET TO THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 32 TO THE NORTH LINE OF SAID AURORA AVENUE AND THE POINT OF TERMINATION, COUNTY OF BOULDER, STATE OF COLORADO,



VICINITY MAP  
NTS

### LIST OF AGENCIES

**OWNER / DEVELOPER**  
BRICKSTONE PARTNERS  
2990 17th STREET, SUITE 702  
DENVER, CO 80206  
DAN OTIS

**ARCHITECT**  
SA+R  
1821 BLAKE STREET, SUITE 1A  
DENVER, CO 80202  
(303) 436-9551  
ANDREW J. ROCKMORE

**CIVIL ENGINEER**  
JVA, INC.  
1319 SPRUCE STREET  
BOULDER, CO 80302  
(303) 444-1951  
CHARLIE R. HAGER, PE

**LANDSCAPE ARCHITECT**  
PHASE ONE LANDSCAPES  
2310 S. SYRACUSE WAY  
DENVER, CO 80231  
(303) 750-6060

**MUNICIPALITY**  
CITY OF BOULDER - PLANNING DEPARTMENT  
1739 BROADWAY, THIRD FLOOR  
BOULDER, CO 80302  
(303) 441-1880  
ELAINE McLAUGHLIN

**FIRE DISTRICT**  
CITY OF BOULDER - FIRE DEPARTMENT  
1805 33RD STREET  
BOULDER, CO 80301  
(303) 441-3350  
DAVE LOWREY

### LIST OF DRAWINGS

DRAWING NO	TITLE
C0.0	COVER SHEET
C0.1	LEGEND, NOTES, & ABBREVIATIONS
C0.2	EROSION CONTROL PLAN
C0.3	DEMOLITION PLAN
C1.0	GRADING & DRAINAGE PLAN
C1.1	DRAINAGE DETAILS
C1.2	DRAINAGE DETAILS
C1.3	SWMP & EROSION CONTROL DETAILS
C2.0	UTILITY PLAN
C2.1	UTILITY DETAILS
C2.2	UTILITY DETAILS
C3.0	HORIZONTAL CONTROL PLAN
C3.1	SITE DETAILS
C3.2	SITE DETAILS

PREPARED UNDER THE SUPERVISION OF

JVA, Inc.

910 28TH STREET  
BOULDER, CO 80305

2011 Shears Adkins Rockmore

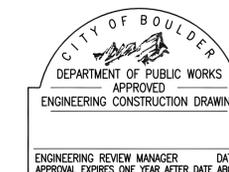
Date: 07.25.2011

Project Name:  
910 28TH STREET  
Issued For / Phase:  
Building Permit &  
Tech Docs

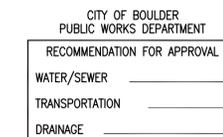
Drawn: JMA

Revisions:

TECH DOC 2nd SUBMITTAL  
8/26/2011



Sheet Name:  
COVER SHEET



Sheet Number:  
C0.0

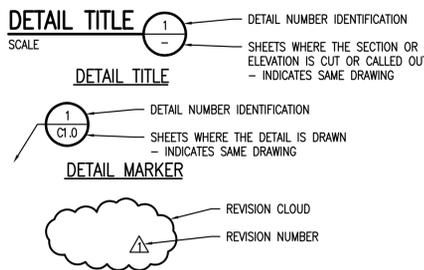
**ABBREVIATIONS**

AASHTO	AMERICAN ASSOC. OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	JTS	JOINTS
ABAN	ABANDON	KB	KICKBLOCK
AC	ASPHALTIC CONCRETE PAVING	KO	KNOCKOUT
ADDL	ADDITIONAL		
ADDM	ADDENDUM	L	LEFT OR LITER
ADJ	ADJUSTABLE	LSCAPE	LANDSCAPE(ING)
AL	ALUMINUM	LF	LINEAR FOOT
ALT	ALTERNATE	LP	LIGHT POLE
AMT	AMOUNT	LT	LIGHT
APPROX	APPROXIMATE	LWL	LOW WATER LEVEL
ARCH	ARCHITECT(U)RAL		
ARV	AIR RELIEF VALVE	MAINT	MAINTENANCE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MAN	MANUAL
ASPH	ASPHALT	MATL	MATERIAL
ASSY	ASSEMBLY	MAX	MAXIMUM
AUTO	AUTOMATIC	MECH	MECHANICAL
AVG	AVERAGE	MFR	MANUFACTURER
		MH	MANHOLE
		MISC	MISCELLANEOUS
BC	BACK OF CURB		
BFV	BUTTERFLY VALVE	N	NORTH
BLDG	BUILDING	NA	NOT APPLICABLE
BLK	BLOCK	NIC	NOT IN CONTRACT
BM	BENCH MARK	NPT	NATIONAL PIPE THREAD
BMP	BEST MANAGEMENT PRACTICE	NTS	NOT TO SCALE
BOT	BOTTOM		
BSMT	BASEMENT	OC	ON CENTER
BVCE	BEGIN VERTICAL CURVE ELEVATION	OD	OUTSIDE DIAMETER
BVCS	BEGIN VERTICAL CURVE STATION	OPP	OPPOSITE
BW	BOTTOM OF WALL	OPT	OPTIONAL
CB	CATCH BASIN	PC	POINT OF CURVATURE
CCW	COUNTER CLOCKWISE	PCD	PRESSURE CLEAN OUT
CDOT	COLORADO DEPT OF TRANSPORTATION	PCR	POINT OF CURVE RETURN
CIP	CAST IRON PIPE	PI	POINT OF INTERSECTION
CJ	CONSTRUCTION JOINT	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTER LINE OR CHAIN LINK	PL	PROPERTY LINE
CLR	CLEAR	PE	POLYETHYLENE
CMP	CORRUGATED METAL PIPE	PRELIM	PRELIMINARY
CMU	CONCRETE MASONRY UNIT	PREP	PREPARATION
CO	CLEANOUT	PROP	PROPOSED
CONC	CONCRETE	PRV	PRESSURE REDUCING VALVE OR PRESSURE RELIEF VALVE
CONST	CONSTRUCTION	PT	POINT OF TANGENCY
CONT	CONTINUOUS(ATION)	PV	PLUG VALVE
COR	CORNER	PVC	POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVATURE
CTR	CENTER	PVMT	PAVEMENT
CY	CUBIC YARDS	QTY	QUANTITY
DEMO	DEMOLITION	R	RIGHT
DIA	DIAMETER	RAD	RADIUS
DIAG	DIAGONAL	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	RD	ROOF DRAIN
DOM	DOMESTIC	RE	REFERENCE
DR	DRAIN	RECT	RECTANGULAR
DWG	DRAWING	REINF	REINFORCE (D) (ING) (MENT)
DWL	DOWEL	REQD	REQUIRED
		ROW	RIGHT OF WAY
E	EAST	SAN	SANITARY
EA	EACH	SD	STORM DRAIN
EJ	EXPANSION JT	SECT	SECTION
EL	ELEVATION	SPEC	SPECIFICATION
		SQ	SQUARE
		SQ FT	SQUARE FOOT
		SQ YD	SQUARE YARD
		SS	SANITARY SEWER
		SST	STAINLESS STEEL
		STA	STATION
		STD	STANDARD
		STL	STEEL
		STRUCT	STRUCTURAL
		SWMP	STORMWATER MANAGEMENT PLAN
		SYM	SYMMETRICAL
ELEC	ELECTRICAL	TB	THRUST BLOCK
ENGR	ENGINEER	TBC	TOP BACK OF CURB
EOP	EDGE OF PAVEMENT	TBM	TEMPORARY BENCH MARK
EQ	EQUAL	TEMP	TEMPORARY
EQUIP	EQUIPMENT	THK	THICK
EQUIV	EQUIVALENT	TOB	TOP OF BANK
ESMT	EASEMENT	TOC	TOP OF CONCRETE OR TOP OF CURB
EST	ESTIMATE	TOT	TOTAL
EVCE	END VERTICAL CURVE ELEVATION	TW	TOP OF WALL
EVCS	END VERTICAL CURVE STATION	TYP	TYPICAL
EXP JT	EXPANSION JOINT	UGE	UNDERGROUND ELECTRIC
EXIST	EXISTING	UTIL	UTILITY
		VERT	VERTICAL
		VC	POINT OF VERTICAL CURVATURE
FND	FOUNDATION	W	WIDE OR WIDTH
FES	FLARED END SECTION	W/	WITH
FF	FINISH FLOOR	W/O	WITHOUT
FG	FINISH GRADE	WOCE	WATER QUALITY CONTROL ELEVATION
FG	FIRE HYDRANT	WSE	WATER SURFACE ELEVATION
FL	FLOW LINE	X SECT	CROSS SECTION
FN	FENCE		
FOC	FACE OF CONCRETE	YH	YARD HYDRANT
FT	FEET		
FTG	FOOTING OR FITTING		
G	GAS		
GA	GAUGE		
GAL	GALLON		
GALV	GALVANIZED		
GCO	GRADE CLEANOUT		
GND	GROUND		
GV	GATE VALVE		
H	HIGH		
HB	HOSE BIB		
HE	HORIZONTAL ELLIPTICAL		
HDWL	HEADWALL		
HNDRL	HAND RAIL		
HORIZ	HORIZONTAL		
HP	HIGH POINT		
HR	HOUR		
HVAC	HEATING, VENTILATION, AIR CONDITIONING		
HWY	HIGHWAY		
HWL	HIGH WATER LINE		
HYD	HYDRANT		
INCL	INCLUDED		
ID	INSIDE DIAMETER		
IN	INLET		
INV	INVERT		
IRR	IRRIGATION		

**LEGEND**

	BENCHMARK
	MANHOLE
	AREA DRAIN
	COMBINATION INLET
	TYPE R INLET
	TYPE 13 FIELD INLET
	FLARED END SECTION W/ RIPRAP
	TEE W/ THRUST BLOCK
	BEND W/ THRUST BLOCK
	END CAP W/ THRUST BLOCK
	GATE VALVE
	REDUCER/INCRASER
	WATER METER
	FIRE HYDRANT
	SIGN W/ POST
	STORM DRAIN - LARGER PIPE
	STORM DRAIN - SMALLER PIPE
	ROOF DRAIN
	SANITARY SEWER
	WATER
	IRRIGATION
	UNDERDRAIN
	TRENCH DRAIN
	FLOOR DRAIN / FOUNDATION DRAIN
	ELECTRIC
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	TELEPHONE
	CABLE TV
	FIBER OPTIC
	GAS
	FENCE
	FLOW LINE OF DITCH OR WASH
	SLOPE ARROW
	PROPOSED SPOT ELEVATION
	EXIST SPOT ELEVATION
	PROPOSED INDEX CONTOUR
	PROPOSED INTERMEDIATE CONTOUR
	EXIST INDEX CONTOUR
	EXIST INTERMEDIATE CONTOUR
	CURB AND GUTTER
	SPILL/CATCH CURB TRANSITION
	SIDEWALK
	CONCRETE PAVING
	ASPHALT PAVING
	PROPOSED BUILDING
	BLDG ACCESS
	EXIST BUILDING
	DEMO SUBSURFACE FEATURE
	DEMO SURFACE FEATURE
	DEMO BUILDING
	ABANDON UTILITY
	DEMO (REMOVE) TREE
	LIMITS OF SAWCUT
	LIMITS OF WORK
	EASEMENT LINE
	PROPERTY LINE / ROW

**SYMBOLS**



**GENERAL NOTES:**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE CITY OF BOULDER, JURISDICTIONAL FIRE PROTECTION REQUIREMENTS, AND APPLICABLE STATE AND LOCAL STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL HAVE IN POSSESSION AT THE JOB SITE AT ALL TIMES ONE (1) SIGNED COPY OF APPROVED PLANS, STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN EMERGENCY ACCESS ROUTES TO THE SITE AND STRUCTURE AT ALL TIMES PER THE APPLICABLE JURISDICTIONAL FIRE PROTECTION DISTRICT REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ANY VARIANCE TO THE ABOVE DOCUMENTS. NOTIFY ENGINEER OF ANY CONFLICTING STANDARDS OR SPECIFICATIONS. IN THE EVENT OF ANY CONFLICTING STANDARD OR SPECIFICATION, THE MORE STRINGENT OR HIGHER QUALITY STANDARD, DETAIL OR SPECIFICATION SHALL APPLY.
- THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARD SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK, INCLUDING, BUT NOT LIMITED TO A LOCAL AND STATE GROUNDWATER DISCHARGE AND COLORADO DEPARTMENT OF HEALTH AND ENVIRONMENT (CDPHE) STORMWATER DISCHARGE PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE REQUIRED PARTY (OWNER, OWNER'S REPRESENTATIVE, MUNICIPAL/DISTRICT INSPECTOR, GEOTECHNICAL ENGINEER, ENGINEER AND/OR UTILITY OWNER) AT LEAST 48 HOURS PRIOR TO START OF ANY CONSTRUCTION. PRIOR TO BACKFILLING, AND AS REQUIRED BY JURISDICTIONAL AUTHORITY AND/OR PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL CONTINUE WITH NOTIFICATIONS THROUGHOUT THE PROJECT AS REQUIRED BY THE STANDARDS AND SPECIFICATIONS.
- THE LOCATIONS OF EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION BASED ON INFORMATION BY OTHERS. NOT ALL UTILITIES MAY BE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT SIZE, LOCATION AND TYPE OF ALL EXISTING UTILITIES WHETHER SHOWN OR NOT BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES AND COSTS WHICH MIGHT OCCUR BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO PROCEEDING WITH GRADING AND CONSTRUCTION. ALL WORK PERFORMED IN THE AREA OF UTILITIES SHALL BE PERFORMED AND INSPECTED ACCORDING TO THE REQUIREMENTS OF THE UTILITY OWNER. LIKEWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAPPING ANY EXISTING UTILITY (INCLUDING DEPTH) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION, AND FOR RELOCATING ENCOUNTERED UTILITIES AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL CONTACT AND RECEIVE APPROVAL FROM ENGINEER BEFORE RELOCATING ANY ENCOUNTERED UTILITIES. CONTRACTOR RESPONSIBLE FOR SERVICE CONNECTIONS, AND RELOCATING AND RECONNECTING AFFECTED UTILITIES AS COORDINATED WITH UTILITY OWNER AND/OR ENGINEER, INCLUDING NON-MUNICIPAL UTILITIES (TELEPHONE, GAS, CABLE, ETC., WHICH SHALL BE COORDINATED WITH THE UTILITY OWNER). THE CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER UPON DISCOVERY OF A UTILITY DISCREPANCY OR CONFLICT. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY NOTIFICATION CENTER OF COLORADO (1-800-922-1987, WWW.UNCC.ORG).
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN FOR OWNER AND/OR CITY APPROVAL AND PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FENCING, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR AGREES TO COMPLY WITH THE PROVISIONS OF THE TRAFFIC CONTROL PLAN AND THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," PART VI, FOR CONSTRUCTION SIGNAGE AND TRAFFIC CONTROL. ALL TEMPORARY AND PERMANENT TRAFFIC SIGNS SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WITH REGARD TO SIGN SHAPE, COLOR, SIZE, LETTERING, ETC. UNLESS OTHERWISE SPECIFIED. IF APPLICABLE, PART NUMBERS ON SIGNAGE DETAILS REFER TO MUTCD SIGN NUMBERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ADJUTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS.
- RIM AND GRATE ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE CONTRACTOR SHALL ADJUST RIMS AND OTHER IMPROVEMENTS TO MATCH FINAL PAVEMENT AND FINISHED GRADE ELEVATIONS.
- THE EXISTING AND PROPOSED ELEVATIONS OF FLATWORK, SIDEWALKS, CURBS, PAVING, ETC. AS SHOWN HEREON ARE BASED ON EXTRAPOLATION OF FIELD SURVEY DATA AND EXISTING CONDITIONS. AT CRITICAL AREAS AND SITE FEATURES, CONTRACTOR SHALL HAVE FORMWORK INSPECTED AND APPROVED BY OWNER PRIOR TO PLACING CONCRETE. MINOR ADJUSTMENTS, AS APPROVED BY OWNER, TO PROPOSED GRADES, INVERTS, ETC. MAY BE REQUIRED TO PREVENT PONDING. ALL FLATWORK MUST PREVENT PONDING AND PROVIDE POSITIVE DRAINAGE AWAY FROM EXISTING AND PROPOSED BUILDINGS, WALLS, ROOF DRAIN OUTFALLS, ACROSS DRIVES AND WALKS, ETC., TOWARDS THE PROPOSED INTENDED DRAINAGE FEATURES AND CONVEYANCES.
- FINAL LIMITS OF REQUIRED ASPHALT SAWCUTTING AND PATCHING MAY VARY FROM LIMITS SHOWN ON PLANS. CONTRACTOR TO PROVIDE SAWCUT AND PATCH WORK TO ACHIEVE POSITIVE DRAINAGE AND A SMOOTH TRANSITION TO EXISTING ASPHALT WITHIN ACCEPTABLE DRIVE SLOPE STANDARDS PER ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL SAWCUTTING AND PATCHING AT UTILITY WORK, ETC. THAT MAY NOT BE DELINEATED ON PLANS.
- ANY EXISTING MONITORING WELLS, CLEANOUTS, VALVE BOXES, ETC. TO BE PROTECTED AND TO REMAIN IN SERVICE. IF FEATURES EXIST, EXTEND OR LOWER TO FINAL SURFACE WITH LIKE KIND CAP WITH STANDARD CAST ACCESS LID WITH SAME MARKINGS. IN LANDSCAPED AREAS PROVIDE A CONCRETE COLLAR (18"x18"x6" THICK) AT ALL EXISTING AND PROPOSED MONITORING WELLS, CLEANOUTS, VALVE BOXES, ETC.
- OWNER TO APPROVE ALL CONCRETE FINISHING, JOINT PATTERNS AND COLORING REQUIREMENTS PRIOR TO CONSTRUCTION. SUBMIT JOINT LAYOUT PLAN TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
- PIPE LENGTHS AND HORIZONTAL CONTROL POINTS SHOWN ARE FROM CENTER OF STRUCTURES, END OF FLARED END SECTIONS, ETC. SEE STRUCTURE DETAILS FOR EXACT HORIZONTAL CONTROL LOCATION. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ACTUAL PIPE LENGTHS TO ACCOUNT FOR STRUCTURES AND LENGTH OF FLARED END SECTIONS.
- ALL SURPLUS MATERIALS, TOOLS, AND TEMPORARY STRUCTURES, FURNISHED BY THE CONTRACTOR, SHALL BE REMOVED FROM THE PROJECT SITE BY THE CONTRACTOR. ALL DEBRIS AND RUBBISH CAUSED BY THE OPERATIONS OF THE CONTRACTOR SHALL BE REMOVED, AND THE AREA OCCUPIED DURING CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ITS ORIGINAL CONDITION, WITHIN 48 HOURS OF PROJECT COMPLETION, UNLESS OTHERWISE DIRECTED BY THE MUNICIPALITY OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE LOCAL JURISDICTION, THE STATE OF COLORADO, URBAN DRAINAGE AND FLOOD CONTROL DISTRICT "URBAN STORM DRAINAGE CRITERIA MANUAL VOLUME 3", THE M-STANDARD PLANS OF THE COLORADO DEPARTMENT OF TRANSPORTATION, AND THE APPROVED EROSION CONTROL PLAN. JURISDICTIONAL AUTHORITY MAY REQUIRE THE CONTRACTOR TO PROVIDE ADDITIONAL EROSION CONTROL MEASURES AT THE CONTRACTOR'S EXPENSE DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE PLANS DO NOT FUNCTION AS INTENDED. THE CONTRACTOR IS RESPONSIBLE FOR PROHIBITING SILT AND DEBRIS LADEN RUNOFF FROM LEAVING THE SITE, AND FOR KEEPING ALL PUBLIC AREAS FREE OF MUD AND DEBRIS. THE CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING FINAL GRADES AND FOR REMOVING ACCUMULATED SEDIMENTATION FROM ALL AREAS INCLUDING SWALES AND DETENTION/WATER QUALITY AREAS. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AND REPAIR AREAS AS REQUIRED AFTER VEGETATION IS ESTABLISHED AND ACCEPTED BY OWNER AND MUNICIPALITY.
- ADA COMPLIANCE: THE CROSS-SLOPE OF ALL WALKS MUST BE 2.0% MAX. PERPENDICULAR TO DIRECTION OF TRAVEL. MAXIMUM GRADE OF HANDICAPPED ACCESSIBLE WALKS MUST BE 5.0% MAX. IN DIRECTION OF TRAVEL. MAXIMUM GRADE OF ALL HANDICAP RAMPS IS 8.3% OVER A MAXIMUM 6" RISE. MAXIMUM GRADE AT HANDICAP PARKING IS TYPICALLY 2.0% IN ALL DIRECTIONS. CONTRACTOR TO NOTIFY ENGINEER PRIOR TO PLACEMENT OF FLATWORK OF SITE CONDITIONS OR DISCREPANCIES WHICH PREVENT TYPICAL REQUIRED GRADES FROM BEING ACHIEVED. ALL RAMPS, STAIRS AND RAILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA STANDARDS. HANDICAP RAMPS SHALL CONFORM TO CDOT M-STANDARDS (SEE DETAIL M-608-1, ETC.).
- BENCHMARK INFORMATION: TOPOGRAPHIC INFORMATION WAS PROVIDED BY R&R ENGINEERS SURVEYORS, INC. SEE ALTA/ACSM TILE SURVEY DATED JUNE 29, 2010. PROJECT BENCHMARK: CITY OF BOULDER BENCHMARK G-18, BEING A CHISELED BOX IN TOP OF CURB ON THE SOUTHEAST CORNER OF THE INTERSECTION OF 30TH STREET AND EAST AURORA AVE. ELEVATION = 5304.08' (NGVD 88).
- HORIZONTAL CONTROL INFORMATION: HORIZONTAL CONTROL COORDINATES ARE PROVIDED BY THE FOLLOWING POINTS AS SHOWN ON THE PLANS:  
CP-1: SET PK NAIL N230958.53 E-48920.57 5344.46  
CP-2: FND #5 REBAR N230884.73 E-48692.90 5327.07  
CP-3: FND #5 REBAR W/ 2" ALUM CAP LS 15315 N230964.71 E-48692.94 5330.36
- BASIS OF BEARINGS: THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 32, T. 1 N., R. 70 W. OF THE 6TH P.M., MONUMENTED AS SHOWN HEREON AND ASSUMED TO BEAR N 0°01'00" E.
- PROTECT ALL TREES AND VEGETATION. PLACE CONSTRUCTION FENCING AT DRIP LINE OF TREES AND PLANTS NEAR THE WORK ZONE. DEEP WATER TREES WEEKLY. HAND EXCAVATION REQUIRED AT ROOT ZONES WHERE PROPOSED PAVING OR UTILITY WORK IS WITHIN DRIPLINE OF TREES.
- THE CONTRACTOR SHALL FURNISH THE MUNICIPALITY, AND OWNER WITH A SET OF CONSTRUCTION RECORD DRAWINGS MARKED "AS-BUILT", IN ACCORDANCE WITH MUNICIPALITY STANDARDS. THE PLANS SHALL SHOW FINAL PAVEMENT AND, FLOW LINE ELEVATIONS, CONTOURS AT POND/DRAINAGE FEATURES (AS SURVEYED AND CERTIFIED BY A COLORADO P.L.S.), MANHOLE, PIPE, AND INLET LOCATIONS, INVERTS, GRADE ELEVATIONS, AND SIZES OF ALL UTILITIES, AND ANY VARIATIONS FROM THE APPROVED PLAN.
- LOCATIONS OF CLEANOUTS, LIGHTS, SIGNAGE, JUNCTION BOXES, AND OTHER SIGNIFICANT SITE FEATURES TO BE STAKED FOR ENGINEER AND OWNER APPROVAL PRIOR TO WORK. CLEANOUTS, JUNCTION BOXES, AND ADJACENT GRADES TO BE RAISED ONE-HALF INCH AT ASPHALT/CONCRETE (OR 1" AT LANDSCAPING) TO PROVIDE POSITIVE DRAINAGE AWAY FROM FEATURES.
- BASED ON THE CURRENT PROPOSED BUILDING PLAN, IT IS ANTICIPATED THAT THE PROJECT WILL BE SERVED BY A " " DOMESTIC WATER SERVICE, A " " IRRIGATION SERVICE LINE, A " " FIRE SERVICE LINE, AND A " " SANITARY SERVICE. OWNER AND CONTRACTOR TO VERIFY FINAL TAP SIZES, BASED ON FINAL FIXTURE COUNTS, AT THE TIME OF BUILDING PERMIT APPLICATION AND ADJUST TAP SIZES, SERVICE LINES AND FITTINGS, AND TAP FEES ACCORDINGLY.

**CITY OF BOULDER CONSTRUCTION NOTES:**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "DESIGN AND CONSTRUCTION STANDARDS" OF THE CITY OF BOULDER, AND SHALL BE COMPLETED TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS. IN THE EVENT THAT A DESIGN ELEMENT DOES NOT REFLECT CITY STANDARDS, THE MATTER MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE DIRECTOR OF PUBLIC WORKS. THE ENGINEER SHALL BE RESPONSIBLE FOR RECOMMENDING A SOLUTION OR ALTERNATIVE SOLUTIONS TO THE CITY FOR REVIEW AND APPROVAL.
- THE APPROVAL OF A CONSTRUCTION PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF CONSTRUCTING WORKABLE PUBLIC IMPROVEMENTS. ALL REVISIONS AND/OR CORRECTIONS REQUIRED WILL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY, AND AT THEIR EXPENSE.
- THESE PLANS HAVE BEEN CHECKED BY THE CITY OF BOULDER ONLY FOR CONFORMANCE WITH THE "DESIGN AND CONSTRUCTION STANDARDS," COMPLIANCE WITH DEVELOPMENT AGREEMENT CONDITIONS, AND FOR GENERAL CONCEPTUAL APPROVAL OF PUBLIC IMPROVEMENTS AS SHOWN. THE CITY'S REVIEW DOES NOT VERIFY OR ENSURE THE ACCURACY OF EXISTING OR PROPOSED DIMENSIONS, LINES, COORDINATES, OR GRADES SHOWN, INCLUDING ALL EXISTING UTILITIES SHOWN OR NOT SHOWN.
- UTILITY LOCATIONS SHOWN REFLECT AVAILABLE RECORD DATA. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES SHOWN AND OTHERWISE LOCATED. THE CONTRACTOR SHALL CONTACT THE "UTILITY NOTIFICATION CENTER OF COLORADO" AT 1-800-922-1987 FOR UTILITY LOCATES 24 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- BEFORE WORK BEGINS, THE CONTRACTOR SHALL OBTAIN A PERMIT TO WORK IN THE RIGHT-OF-WAY FROM THE CITY AND MUST NOTIFY THE CITY RIGHT-OF-WAY INSPECTION STAFF AT LEAST 24 HOURS IN ADVANCE OF COMMENCING CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL OBTAIN AND MAINTAIN A COMPLETE AND APPROVED SET OF CONSTRUCTION PLANS. THESE DRAWINGS, AND ANY REQUIRED PERMITS, SHALL BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES AND SHALL BE MADE AVAILABLE TO CITY STAFF UPON REQUEST. IF CONSTRUCTION PLANS ARE NOT READILY AVAILABLE AT THE PROJECT SITE, THE DIRECTOR OF PUBLIC WORKS MAY ISSUE A STOP WORK ORDER AND HALT ALL CONSTRUCTION ACTIVITIES PENDING COMPLIANCE BY THE CONTRACTOR.
- THE CONTRACTOR AGREES TO COMPLY WITH THE PROVISIONS OF THE TRAFFIC CONTROL PLAN AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," "TEMPORARY TRAFFIC CONTROL," FOR CONSTRUCTION SIGNAGE AND TRAFFIC CONTROL.
- ALL SURPLUS MATERIALS, TOOLS, AND TEMPORARY STRUCTURES, FURNISHED BY THE CONTRACTOR, SHALL BE REMOVED FROM THE PROJECT SITE BY THE CONTRACTOR. ALL DEBRIS AND RUBBISH CAUSED BY THE OPERATIONS OF THE CONTRACTOR SHALL BE REMOVED, AND THE AREA OCCUPIED DURING CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ITS ORIGINAL CONDITION, WITHIN 48 HOURS OF PROJECT COMPLETION, UNLESS OTHERWISE DIRECTED BY THE DIRECTOR OF PUBLIC WORKS.
- THE CONTRACTOR SHALL PROVIDE TREE AND LANDSCAPE PROTECTION AS SET FORTH IN CHAPTER 6-6, "PROTECTION OF TREES AND PLANTS," BOULDER REVISED CODE (B.R.C.) 1981 AND THE CITY OF BOULDER DESIGN AND CONSTRUCTION STANDARDS (DCS). ALL LANDSCAPING SHALL BE PROVIDED AND MAINTAINED IN COMPLIANCE WITH THE APPROVED LANDSCAPING PLAN, B.R.C. AND DCS.
- THE CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT "URBAN STORM DRAINAGE CRITERIA MANUAL VOLUME 3", THE M STANDARD PLANS OF THE COLORADO DEPARTMENT OF TRANSPORTATION, AND THE APPROVED EROSION CONTROL PLAN. THE DIRECTOR OF PUBLIC WORKS MAY REQUIRE THE CONTRACTOR TO PROVIDE ADDITIONAL EROSION CONTROL MEASURES DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE PLANS DO NOT FUNCTION AS INTENDED.
- THE CITY OF BOULDER REQUIRES THAT SIDEWALKS CONSTRUCTED HAVE A CROSS SLOPE OF LESS THAN 2%. SIDEWALKS SHALL BE DESIGNED AND CONSTRUCTED WITH CROSS SLOPES SUFFICIENTLY LESS THAN 2% TO ENSURE THAT THEY DO NOT EXCEED THE 2% MAXIMUM.
- CONTACT THE CITY OF BOULDER SIGN SHOP (303-413-7122) FOR LOCATION OF ALL SIGNS PRIOR TO INSTALLATION AND FOR SIGN LAYOUT/DETAILS PRIOR TO ORDERING.
- ALL SIGNS SHEETING TO BE CLASS XI (DG3 MATERIAL) WITH 3M 1150 OVERLAY FILM.
- ALL SIGNS SHALL BE 0.100 GAUGE ALUMINUM.
- ALL SIGN POST TO BE 12 GAUGE 2 INCH UNISTRUT
- ALL SIGN BASES TO BE 12 GAUGE 2-1/4 INCH UNISTRUT.
- SIGN POST LENGTHS WILL VARY, BUT 7 FOOT MINIMUM CLEARANCE FROM BOTTOM OF SIGN TO GROUND LEVEL IS REQUIRED.
- ALL SIGN MOUNT HARDWARE TO BE GATOR LOCK SYSTEM.

**SURVEY LEGEND**

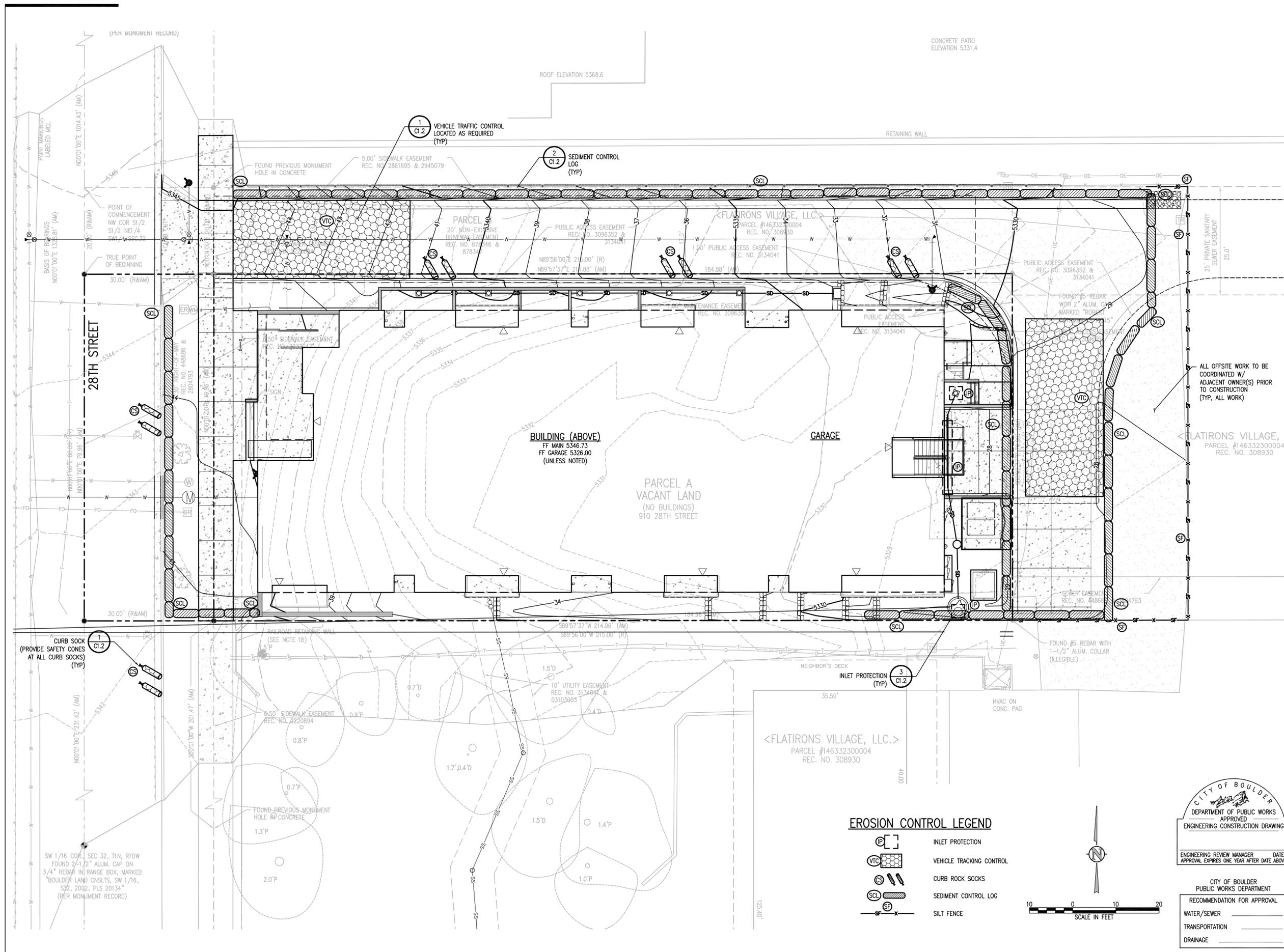
	FOUND SURVEY MONUMENT AS DESCRIBED		PROPERTY LINE
	TELEPHONE PEDESTAL		RIGHT-OF-WAY LINE
	WATER VALVE		ADJOINING LOT LINE
	WATER METER		CURB & GUTTER W/ PAN
	FIRE HYDRANT		WATER LINE
	SANITARY SEWER MANHOLE		SANITARY SEWER LINE
	STORM SEWER MANHOLE		



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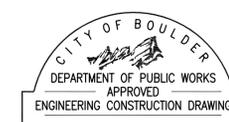
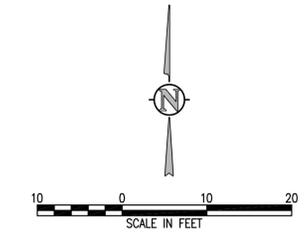
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ALL OFFSITE WORK TO BE COORDINATED W/ ADJACENT OWNER(S) PRIOR TO CONSTRUCTION (TYP, ALL WORK)

**EROSION CONTROL LEGEND**

- INLET PROTECTION
- VEHICLE TRACKING CONTROL
- CURB ROCK SOCKS
- SEDIMENT CONTROL LOG
- SILT FENCE



ENGINEERING REVIEW MANAGER DATE APPROVAL EXPIRES ONE YEAR AFTER DATE ABOVE

CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL  
WATER/SEWER \_\_\_\_\_  
TRANSPORTATION \_\_\_\_\_  
DRAINAGE \_\_\_\_\_

Date: 07.25.2011

Project Name:  
**910 28TH STREET**  
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**Building Permit & Tech Docs**

Drawn: JMA  
Revisions:  
TECH DOC 2nd SUBMITTAL 8/26/2011

Sheet Name:  
**EROSION CONTROL PLAN**

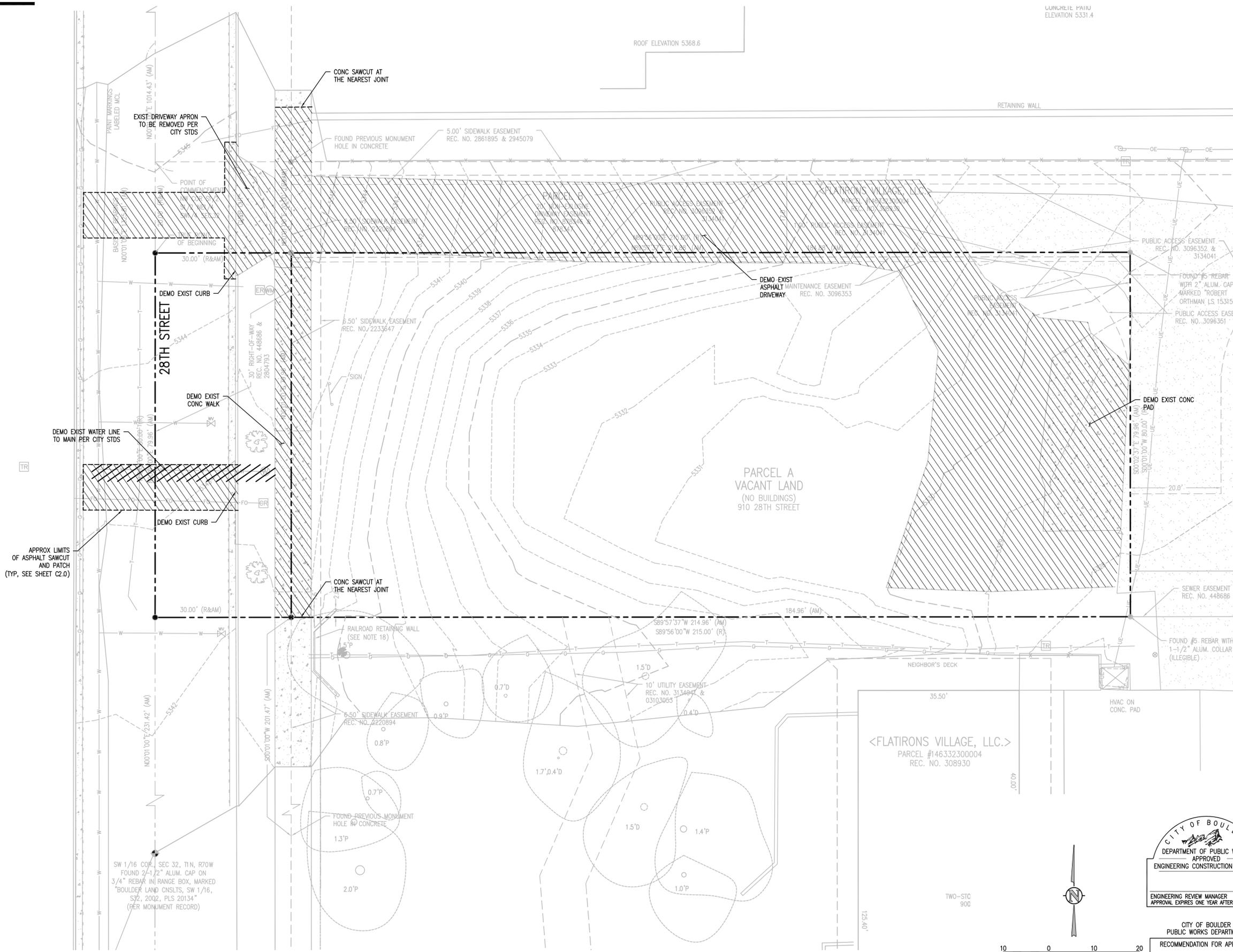
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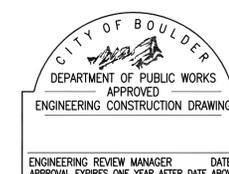


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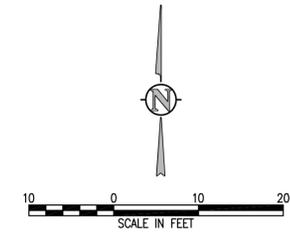


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**DEMOLITION PLAN**

CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

WATER/SEWER	_____
TRANSPORTATION	_____
DRAINAGE	_____

Sheet Number:  
**C0.3**





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# 910 28TH STREET

## BOULDER, CO 80303

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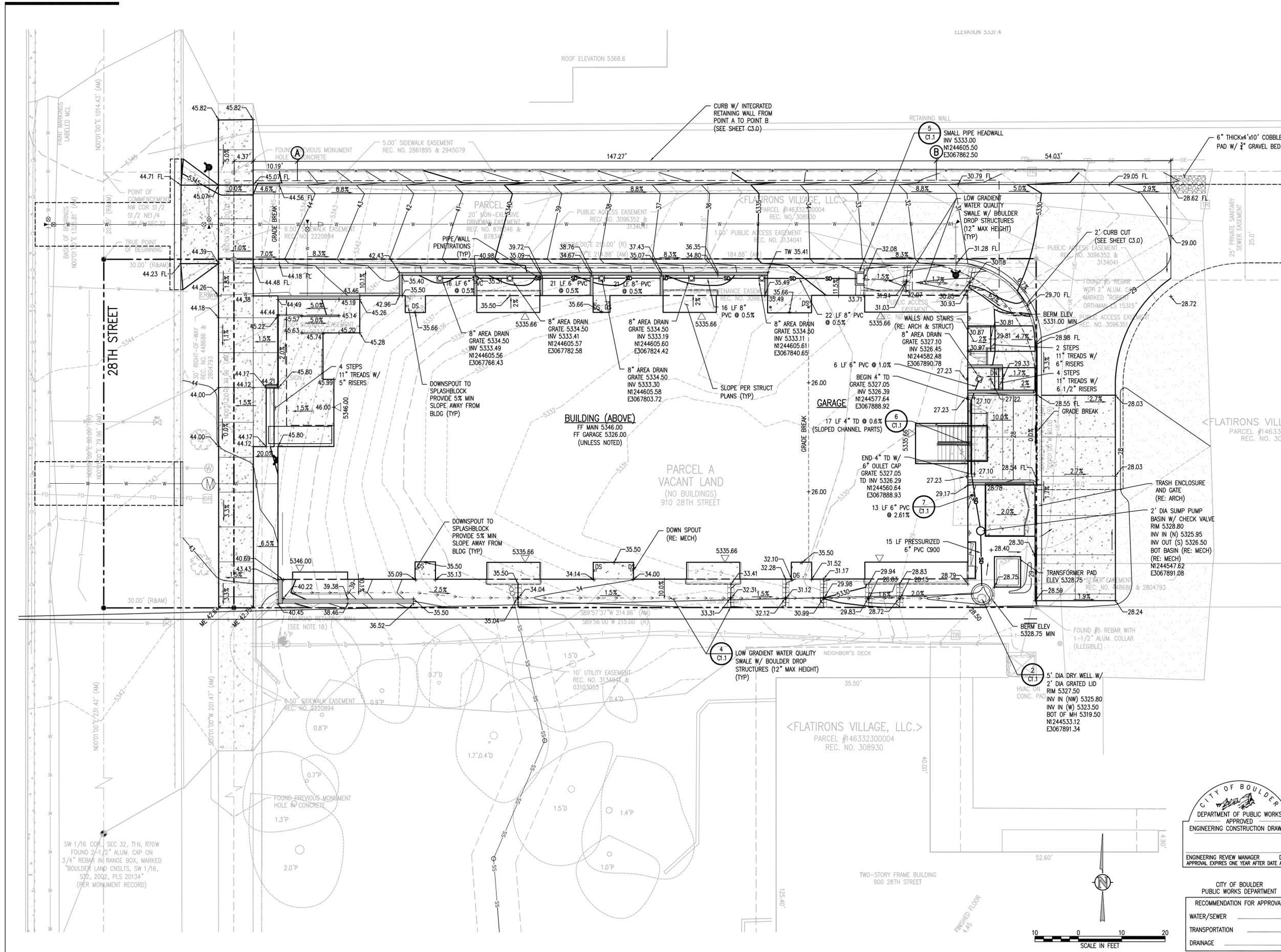
Revisions:

TECH DOC 2nd SUBMITTAL  
8/26/2011

Sheet Name:  
GRADING AND  
DRAINAGE PLAN

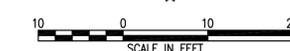
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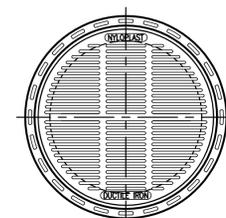


ENGINEERING REVIEW MANAGER DATE  
APPROVAL EXPIRES ONE YEAR AFTER DATE ABOVE

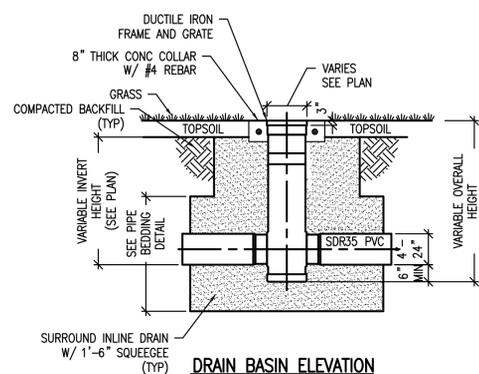
CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL  
WATER/SEWER \_\_\_\_\_  
TRANSPORTATION \_\_\_\_\_  
DRAINAGE \_\_\_\_\_



**910 28TH STREET**  
**BOULDER, CO 80303**

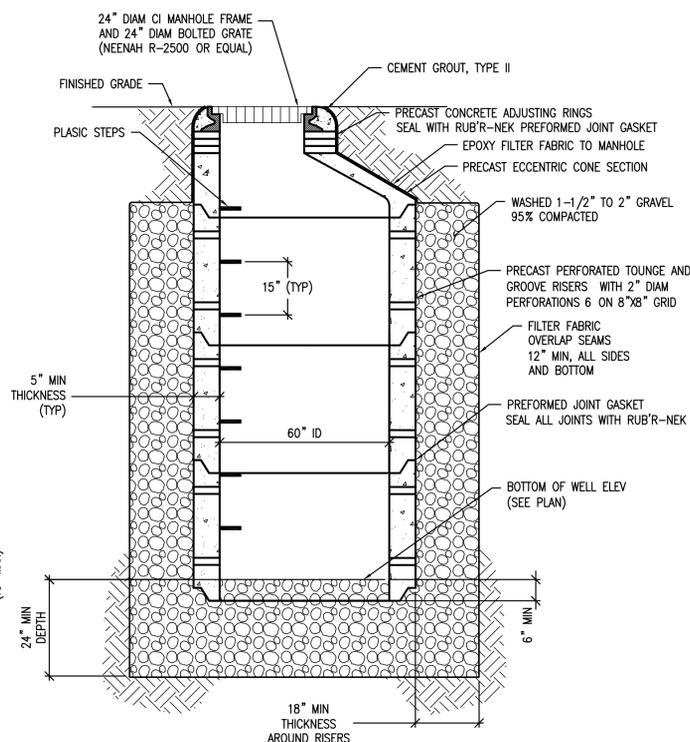


**PEDESTRIAN GRATE COVER**

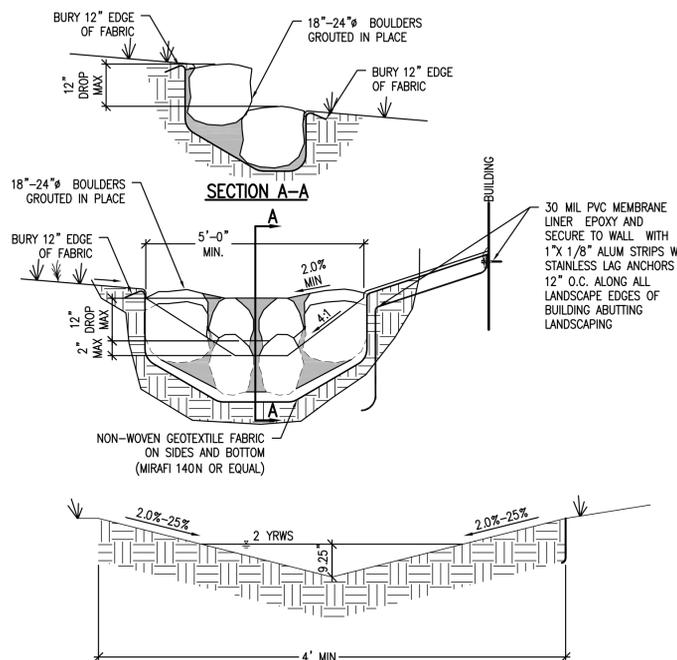


**DRAIN BASIN ELEVATION**

**AREA DRAIN DETAIL 1**  
NTS C1.0



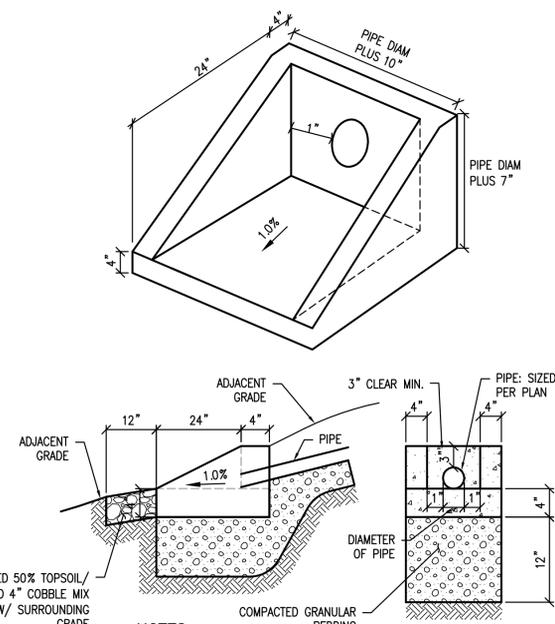
**PRECAST DRY WELL DETAIL 2**  
NTS C1.0



**NOTES:**

- MAINTENANCE REQUIREMENTS:**
- MAINTAIN IRRIGATED GRASS AT 2 TO 4 INCHES TALL OR NONIRRIGATED NATIVE GRASS AT 6 TO 8 INCHES TALL. COLLECT CUTTINGS AND DISPOSE OF THEM OFFSITE OR USE A MULCHING MOWER.
  - AS NEEDED BY INSPECTION, REMOVE ALL COLLECTED DEBRIS AND LITTER. KEEP THE AREA CLEAN FOR AESTHETIC REASONS, WHICH ALSO REDUCES FLOATABLES BEING FLUSHED DOWNSTREAM. REPAIR SWALE IF DAMAGED AFTER STORM EVENTS
  - ANNUALLY CHECK THE SWALE FOR BOULDER PLACEMENT AND SEDIMENT ACCUMULATED IN SWALE AND NEAR GROUDED BOULDER DROPS AND AT INLETS.
  - ROUTINELY REMOVE ACCUMULATED SEDIMENT NEAR CULVERTS AND WITHIN THE CHANNEL TO MAINTAIN FLOW CAPACITY. REPLACE THE GRASS AREAS DAMAGED IN THE PROCESS. PERIODICALLY REPAIR AND REVEGETATE ERODED AREAS IN THE CHANNELS DUE TO HIGH FLOWS.

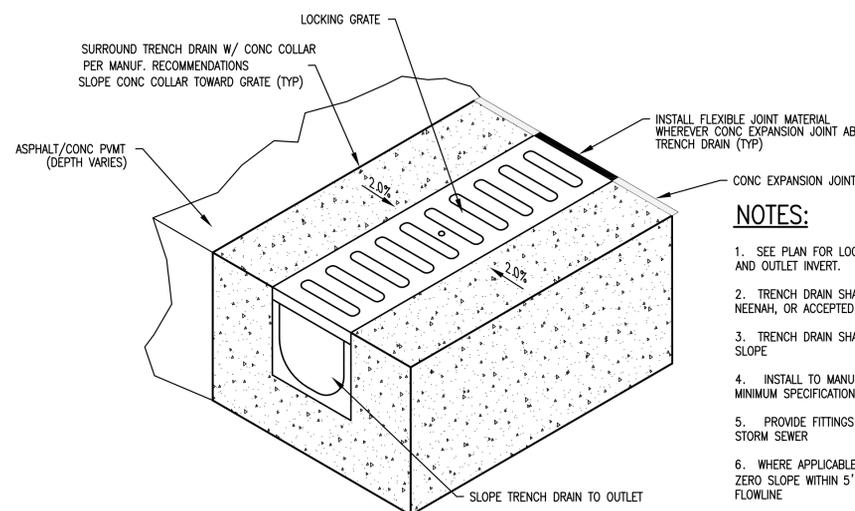
**LOW GRADIENT WATER QUALITY SWALE DETAIL 3**  
NTS C1.0



**NOTES:**

- COMPACT SUBGRADE PER SPECIFICATIONS
- CHAMFER ALL EXPOSED EDGES
- ALL CONCRETE TO BE FIBER REINFORCED PER SPECIFICATIONS.

**SMALL PIPE HEADWALL 4**  
NTS C1.0

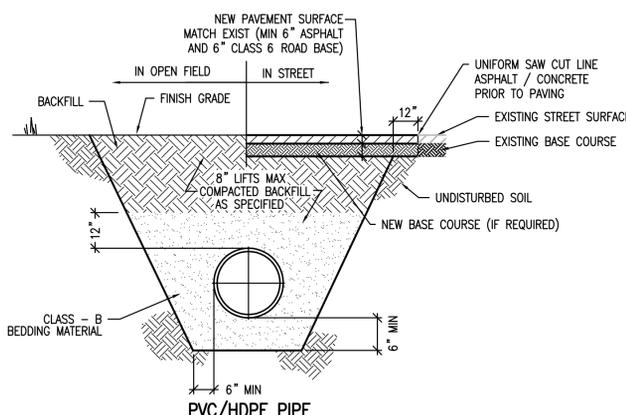


**NOTES:**

- SEE PLAN FOR LOCATION, LENGTH, INVERTS OF TRENCH AND OUTLET INVERT.
- TRENCH DRAIN SHALL BE ACO POWERLOCK S100K, NEENAH, OR ACCEPTED SUBSTITUTION
- TRENCH DRAIN SHALL NOT CONTAIN SECTIONS OF ZERO SLOPE
- INSTALL TO MANUFACTURERS SPECIFICATIONS AND MINIMUM SPECIFICATIONS PER THIS DETAIL
- PROVIDE FITTINGS AS REQUIRED TO CONNECT TO STORM SEWER
- WHERE APPLICABLE, TRANSITION CURB AND GUTTER TO ZERO SLOPE WITHIN 5' OF TRENCH DRAIN AND EXTEND TOP FLOWLINE

**TRENCH DRAIN DETAIL 5**  
NTS C1.0

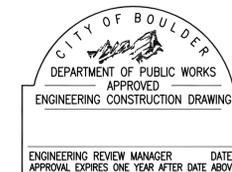
**NOTES:**  
TRENCH DRAIN TO BE INCORPORATED INTO STRUCTURAL SLAB.  
(SEE ARCH & STRUCT PLANS)



**NOTES:**

- IF UNSTABLE MATERIALS ARE FOUND IN TRENCH BOTTOM, OVEREXCAVATE PER SPEC OR AS REQUIRED.
- TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKERS AND THE PROTECTION OF OTHER UTILITIES.
- MINIMUM COVER 18" BELOW FINAL GRADE.

**STORM SEWER PIPE BEDDING DETAIL 6**  
NTS C1.0



CITY OF BOULDER DEPARTMENT OF PUBLIC WORKS RECOMMENDATION FOR APPROVAL	
WATER/SEWER	_____
TRANSPORTATION	_____
DRAINAGE	_____

Date: 07.25.2011

Project Name:  
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8/26/2011

Sheet Name:  
**DRAINAGE DETAILS**

Sheet Number:

**C1.1**

## STORMWATER MANAGEMENT PLAN (SWMP)

THE SITE IS LOCATED AT 910 28TH STREET. THE PROPOSED CONSTRUCTION CONSISTS OF PARKING, UTILITY SERVICE CONNECTIONS, BUILDING CONSTRUCTION, PAVING OF SIDEWALKS, PARKING LOTS, ENTRANCE DRIVES, UTILITY INFRASTRUCTURE AND STORMWATER INFRASTRUCTURE CONSTRUCTION IN THE CITY OF BOULDER, COLORADO. THE TOTAL SITE AREA AND TOTAL DISTURBED AREA IS APPROXIMATELY 0.47 ACRES AND 0.47 ACRES RESPECTIVELY. THE SITE IS LOCATED AT APPROXIMATELY 40°00'15"N LATITUDE, 105°15'30" W LONGITUDE.

THE ESTIMATED SEQUENCE OF CONSTRUCTION STARTS IS AS FOLLOWS:

ROAD & OVERLOT GRADING –	(OCT, 2011)
UTILITY CONSTRUCTION –	(OCT 2011)
BUILDING CONSTRUCTION –	(NOV 2011)
PAVING –	(AUG 2012)
SITE RESTORATION –	(SEPT 2012)

THE PRESENT SITE CONSISTS OF GRAVEL DRIVES AND VEGETATION AND IS APPROXIMATELY 97% COVERED WITH VEGETATIVE GROUND COVER. THE ESTIMATED HISTORIC AND DEVELOPED 100YR RUNOFF COEFFICIENTS ARE 0.62 AND 0.88 RESPECTIVELY.

OFFSITE RUNOFF FLOWS ONTO THE PROPERTY. ONSITE FLOWS ARE TREATED IN A WATER QUALITY SWALE. STORMWATER SURFACE DISCHARGED FROM THIS SITE FLOWS TO THE SOUTH AND EAST AND INTO AURORA AVENUE. A DRAINAGE REPORT FOR THIS DEVELOPMENT HAS BEEN SUBMITTED TO THE ENGINEER OF THE CITY OF BOULDER, COLORADO.

OTHER POTENTIAL POLLUTION SOURCES SUCH AS VEHICLE FUELING ARE LOCATED AT CONSTRUCTION ENTRANCES AND EXISTS. (OR DO NOT EXIST AT THIS SITE)

NON-STORMWATER COMPONENTS OF THE DISCHARGE DO NOT EXIST ON THIS SITE.

## BEST MANAGEMENT PRACTICES FOR STORMWATER MANAGEMENT

NON STRUCTURAL BMPs WILL BE IMPLEMENTED TO THE MAXIMUM EXTENT POSSIBLE. THE UTILIZATION OF NON STRUCTURAL BMPs WILL BE AN ONGOING PROCESS DIRECTED AT PREVENTING EROSION. THE NON STRUCTURAL BMPs WILL RECEIVE CONTINUOUS EMPHASIS THROUGHOUT CONSTRUCTION BECAUSE THEY AVERT PROBLEMS BEFORE THEY OCCUR AND REDUCE THE NEED FOR STRUCTURAL BMPs. NON STRUCTURAL BMPs WILL CONSIST PRIMARILY OF PRESERVATION OF EXISTING MATURE VEGETATION AND TREES, PLANNING AND SCHEDULING CONSTRUCTION ACTIVITIES AIMED AT ACHIEVING THE GOAL OF MINIMIZING EROSION. FURTHERMORE, CONSTRUCTION PERSONNEL WILL BE INSTRUCTED AND SUPERVISED IN CONSTRUCTION METHODS CONSISTENT WITH EROSION PREVENTION PRACTICES.

PLANNED STRUCTURAL BMPs FOR EROSION AND SEDIMENT CONTROL ARE SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN. IMPLEMENTING THESE MEASURES SHOULD MINIMIZE NUISANCE SILT AND SEDIMENTATION EXITING THE SITE AND PREVENT CLOGGING EXISTING STORM SEWERS AND STREET GUTTERS.

APPLICATION OF THESE BMPs FOR STORMWATER MANAGEMENT ARE FOR CONSTRUCTION PERIODS AND ARE CONSIDERED TEMPORARY. POST-DEVELOPMENT STORMWATER MANAGEMENT IS PROVIDED THROUGH VEGETATED LANDSCAPED AREAS, GRASSED SWALES, STORM COLLECTION SYSTEM, AND THE UTILIZATION OF COBBLE INFILTRATION SWALES AND POROUS LANDSCAPED DETENTION FACILITIES.

### VEHICLE TRACKING CONTROL (VTC):

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED AT MORREHEAD AVENUE. THE CONSTRUCTION ACCESS AND PARKING WILL BE GRADED AND COVERED WITH A CRUSHED STONE BASE COURSE DURING CONSTRUCTION. THE VEHICLE TRACKING CONTROL WILL BE RELOCATED WITH THE CONSTRUCTION ACCESS AS NECESSARY.

### SILT FENCING (SF):

SILT FENCING SHALL BE INSTALLED WITH RESPECT TO PROPOSED DRAINAGE PATTERNS. SILT FENCE SHALL BE CONSTRUCTED ALONG THE PORTIONS OF THE NORTH, SOUTH AND EAST SIDE OF THE PROPERTY AND ALONG ANY DRAINAGE AREAS SUBJECT TO EROSION. THE FENCE SHALL BE INSTALLED AT THE DOWNHILL SIDE OF THE EXISTING SLOPES ACROSS THE SITE AND AT ALL POINT DISCHARGE AREAS WHETHER SHOWN OR NOT, SILT FENCE SHALL BE MAINTAINED AS NEEDED THROUGHOUT THE CONSTRUCTION PROCESS. THE TEMPORARY SILT FENCE WILL REMAIN UNTIL THE STORM SEWER STRUCTURES ARE COMPLETED AND GROUND COVER IS EFFECTIVE.

### INLET PROTECTION (IP):

THE INLET PROTECTION WILL BE INSTALLED AS THE STORM SEWER STRUCTURES ARE CONSTRUCTED. EACH INLET ON THE PROPOSED STORM SEWER SYSTEM WILL HAVE A TEMPORARY INLET SEDIMENT TRAP CONSTRUCTED AROUND IT. IN PAVED AREAS, THIS TRAP CONSISTS OF WIRE MESH SOCKS TO FILTER THE STORM RUNOFF AND ALLOW ANY SILT TO SETTLE OUT. IN FIELDS OR LANDSCAPED AREAS THIS TRAP CONSISTS OF WIRE MESH SOCKS.

### STRAW BALE DROP STRUCTURES DAMS (SB):

STRAW BALE BARRIERS WILL BE INSTALLED TO PROTECT THE PROPOSED SWALE(S) PRIOR TO LANDSCAPING THE SITE. THESE BARRIERS WILL REDUCE THE FLOW VELOCITY IN THE SWALE(S) AND ALLOW THE DISTURBED SOIL TO SETTLE OUT.

### OUTLET PROTECTION (OP):

THE STORM SEWER OUTLETS WILL BE PROTECTED WITH RIPRAP. PLACING RIPRAP AT PIPE OUTFALLS REDUCES EXIT VELOCITIES AND REDUCES SCOUR. THIS RIPRAP WILL BE LEFT IN PLACE AS PART OF THE PERMANENT STORMWATER MANAGEMENT PLAN.

### DUST CONTROL MEASURES:

DISTURBED AREAS NOT YET READY TO BE SEEDED, LANDSCAPES, PAVED, OR OTHERWISE STABILIZED SHALL BE WATERED, OR RIPPED AS NECESSARY TO PRECLUDE VISIBLE DUST EMISSIONS.

ITEMS ARE SCHEDULED TO BE IMPLEMENTED ACCORDING TO THE CONSTRUCTION SCHEDULE. AS WORK PROCEEDS, IMPLEMENTATION OF INDIVIDUAL BMPs IS TO COINCIDE WITH THE CONSTRUCTION THEREBY MINIMIZING THE EXPOSURE OF UNPROTECTED AREAS. THE SILT FENCE, INLET PROTECTION (FOR EXISTING INLETS), AND GRAVELING OF THE CONSTRUCTION ENTRANCE WILL BE PERFORMED WHEN THE GRADING BEGINS. THE INLET PROTECTION WILL BE INSTALLED AS THE STORM SEWER STRUCTURES ARE CONSTRUCTED. THE RIPRAP PROTECTION WILL BE INSTALLED AS THE STORM SEWER OUTFALLS OR CULVERTS ARE CONSTRUCTED. THE STRUCTURAL BMPs THAT DO NOT BECOME PART OF THE PERMANENT STORMWATER MANAGEMENT PLAN ARE TO BE REMOVED, AS THE PAVING, LANDSCAPING, AND OTHER PERMANENT GROUNDCOVER INSTALLATIONS ARE COMPLETED. FUGITIVE DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES AND/OR WIND SHALL BE CONTROLLED USING THE BEST AVAILABLE CONTROL TECHNOLOGY AS DEFINED BY THE COLORADO DEPARTMENT OF HEALTH AT THE TIME OF GRADING. THE GRAVELING IS TO BE MAINTAINED AND EXTENDED CONSTRUCTION PROGRESSES ESPECIALLY AROUND THE BUILDING SITE. THE STRUCTURAL BMPs ARE TO BE REMOVED, AS THE PERMANENT LANDSCAPING INSTALLATIONS ARE COMPLETED.

THE EROSION AND SEDIMENT CONTROL PLAN MAY BE MODIFIED BY THE OWNER'S ENGINEER, CITY OR STATE ENGINEERING INSPECTORS OR ITS AUTHORIZED REPRESENTATIVE AS FIELD CONDITIONS WARRANT.

## STORMWATER DETENTION AND WATER QUALITY:

STORMWATER DETENTION AND ONSITE WATER QUALITY IS PROVIDED ONSITE IN DETENTION AREA. WATER QUALITY TREATMENT IS PROVIDED. THE PROPOSED DETENTION AREA WILL BE UTILIZED AS A SEDIMENT BASIN.

## TEMPORARY SEEDING AND MULCHING:

ALL SEEDS FURNISHED SHALL BE FREE FROM NOXIOUS SEEDS SUCH AS RUSSIAN OR CANADIAN THISTLE, COURSE FESCUE, EUROPEAN BINDWEED, JOHNSON GRASS, KNAPWEED, AND LEAFY SPURGE. THE FORMULA USED FOR DETERMINING THE QUALITY OF PURE LIVE SEED (PLS) SHALL BE (POUNDS OF SEED) X (PURITY) X (GERMINATION) = POUNDS OF PURE LIVE SEED (PLS). SEEDING RECOMMENDATIONS ARE PROVIDED BELOW, BUT MAY BE MODIFIED WITH THE OWNER'S APPROVAL TO MAKE THE BEST USE OF EXISTING CLEARINGS AND GRUBBINGS:

SPECIES	COMMON NAME	VARIETY	LBS/ACRE
AGROPYRON SMITHI	WESTERN WHEATGRASS	ARRIBA	8.0
ARRHENATHERUM ELATES	TALL OATGRASS		3.0
LOLIUM PERENNE	PERENNIAL RYEGRASS	PENNFINE	2.0

## TEMPORARY SEEDING AND MULCHING (CONT):

ALL SEEDS SHALL BE DRILLED NOT HYDROSEEDED. ALL DISTURBED AREAS SHALL BE SEEDED AND CRIMP MULCHED IF PERMANENT VEGETATION IS NOT IMMEDIATELY INSTALLED. AFTER SEEDING HAS BEEN COMPLETED, A RATE OF 4,000 LBS. OF STRAW PER ACRE SHALL BE APPLIED UNIFORMLY, CRIMPED IN WITH A CRIMPER OR OTHER APPROVED EQUIPMENT OR OTHERWISE ATTACHED. A TACKIFIER OR JUTE NETTING TO ATTACH MULCH MAY BE USED WITH THE OWNER'S APPROVAL. THE SEEDED AREA SHALL BE CRIMPED MULCHED AND THE MULCH ATTACHED WITHIN TWENTY-FOUR (24) HOURS AFTER SEEDING. AREAS NOT MULCHED AND ATTACHED WITHIN TWENTY-FOUR (24) HOURS AFTER SEEDING MUST BE RESEDED WITH THE SPECIFIED MIX AT THE CONTRACTOR'S EXPENSE, PRIOR TO MULCHING AND ATTACHING. ON STEEP SLOPES OR OTHER SPECIFIED AREAS AS SHOWN ON THE PLANTING PLAN, WHICH ARE DIFFICULT TO MULCH AND ATTACH BY CONVENTIONAL METHOD, BURLAP OR OTHER BLANKETING MATERIALS PROPERLY ANCHORED AND SECURED MAY BE USED WHEN APPROVED BY THE CITY ENGINEER.

## PERMANENT STABILIZATION MEASURES:

RIPRAP FOR STORM DRAIN OUTFALLS AND ROCK CHECK DAMS WILL BECOME PART OF THE PERMANENT STORMWATER MANAGEMENT PLAN AND WILL NOT BE REMOVED. PERMANENT LANDSCAPING WILL INCLUDE SODDING, SEEDING, TREES, SHRUBS, CRUSHER FINES OR OTHER VEGETATIVE COVER. TO OPEN AREAS. NATIVE PERENNIAL SEEDING WILL BE ESTABLISHED IN NON-IRRIGATED AREAS AND SOD OR OTHER VEGETATIVE COVER WILL BE ESTABLISHED IN IRRIGATED OPEN AREAS. ALL PERMANENT STABILIZATION MEASURES WILL BE SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER.

## MATERIALS AND SPILL PREVENTION:

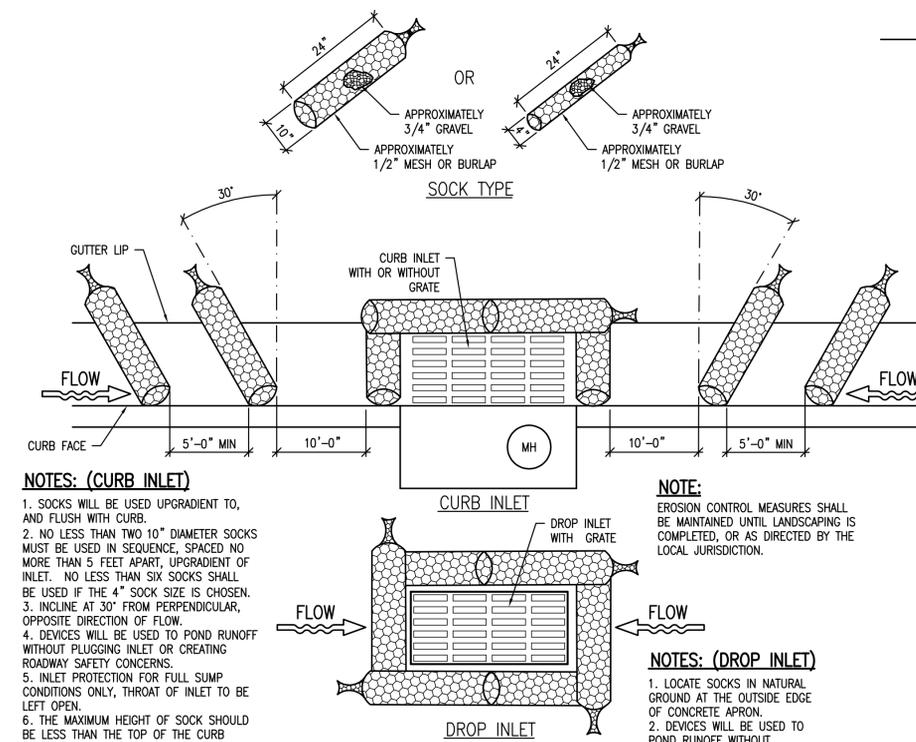
THE CONTRACTOR WILL STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN CONFINED AREAS ON SITE FROM WHICH RUNOFF WILL BE CONTAINED AND FILTERED. MATERIALS WILL BE STORED OFF THE GROUND AND PROTECTED FROM THE WEATHER BY A COVER OR STORED IN A CONTAINER SUCH AS A VAN OR TRAILER. AN EARTHEN DIKE WILL BE CONSTRUCTED AROUND THE PERIMETER OF THE FUEL STORAGE AREA TO PREVENT MATERIALS FROM CONTACT WITH SURFACE RUNOFF. EQUIPMENT MAINTENANCE WILL BE PERFORMED IN A DESIGNATED AREA AND STANDARD MAINTENANCE PROCEDURES, SUCH AS THE USE OF DRIP PANS, WILL BE USED TO CONTAIN PETROLEUM PRODUCTS.

## INSPECTION AND MAINTENANCE:

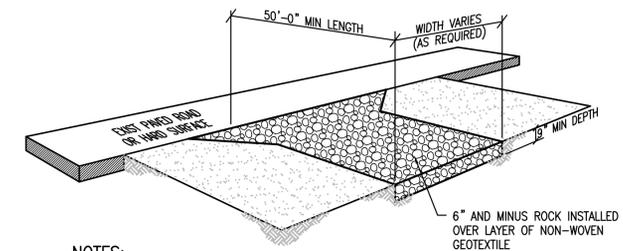
THE EROSION CONTROL MEASURES WILL BE INSPECTED DAILY DURING CONSTRUCTION BY THE CONTRACTOR AND AFTER EACH RAIN EVENT. ALL INSPECTIONS SHALL BE DOCUMENTED AND SHALL INCLUDE THE DATE OF INSPECTION, ANY INCIDENCE OF NON-COMPLIANCE, SIGNED CERTIFICATION THAT THE SITE IS IN COMPLIANCE, AND ANY NOTES, DRAWINGS, MAPS, ETC. PERTAINING TO REPAIRS. COPIES OF ALL DOCUMENTATION SHALL BE DISTRIBUTED TO MUNICIPALITIES AND OWNER ON A REGULAR BASIS AS SPECIFIED BY OWNER. SILT FENCE AND STRAW BALE BARRIERS WILL BE CHECKED FOR UNDERMINING AND BYPASS AND REPAIRED OR EXPANDED AS NEEDED. SEDIMENT SHOULD BE REMOVED FROM INLET FILTERS AND SILT FENCING BEFORE ONE HALF OF THE DESIGN DEPTH HAS BEEN FILLED. SEDIMENTS DEPOSITED IN THE PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY. THE TEMPORARY VEGETATION OF BARE SOILS WILL BE CHECKED REGULARLY AND AREAS WHERE IT IS LOST OR DAMAGED WILL BE RESEDED. AT MINIMUM THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL BMPs EVERY 14 DAYS AND AFTER SIGNIFICANT PRECIPITATION OR SNOWMELT EVENTS. INSTALLATIONS AND MODIFICATIONS AS REQUIRED BY THE CITY WILL BE IMPLEMENTED WITHIN 48 HOURS OF NOTIFICATION. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AND REPAIR AREAS AS REQUIRED AFTER VEGETATION IS ESTABLISHED AND ACCEPTED BY OWNER AND MUNICIPALITY.

## FINAL STABILIZATION AND LONG-TERM STORMWATER QUALITY:

FINAL STABILIZATION IS REACHED WHEN ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH A DENSITY OF AT LEAST 70% OR PRE-DISTURBANCE LEVELS OR EQUIVALENT PERMANENT, PHYSICAL EROSION REDUCTION METHODS HAVE BEEN EMPLOYED. FINAL STABILIZATION WILL BE ACHIEVED USING SOD, NATIVE SEEDING, PERMANENT BMP'S, AND OTHER METHODS. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL STABILIZATION REGARDLESS OF ACCEPTANCE BY OWNER OF THE CONTRACTOR ITEM.



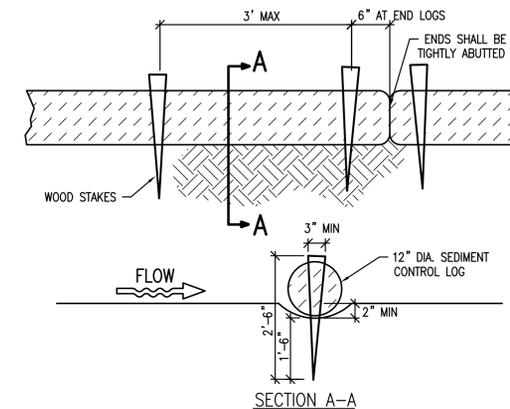
CS IP **GRAVEL SOCK INLET PROTECTION DETAIL** 3 CO.2



### NOTES:

- VEHICLE TRACKING CONTROL PADS SHALL BE INSTALLED AT ALL INGRESS/EGRESS POINTS WHERE VEHICULAR ACCESS TRANSITIONS FROM PAVED SURFACES TO DISTURBED SURFACES.
- THE VTC PAD SHALL CONSIST OF HARD, ANGULAR, DENSE, AND DURABLE STONE. ROUNDED STONE, BOULDERS, RECYCLED ASPHALT, AND RECYCLED CONCRETE ARE NOT ACCEPTABLE.
- ANY CRACKED OR DAMAGED CURB AND/OR GUTTER SHALL BE REPLACED BY THE CONTRACTOR.
- PAD WILL BE REPAIRED AND REFRESHED AS NEEDED TO MAINTAIN FUNCTION AND INTEGRITY.
- VTC PADS SHALL BE INSTALLED AT ALL CONCRETE WASHOUT AREAS AND AT STABILIZED STAGING/STORAGE AREAS.

VTC **VEHICLE TRACKING CONTROL DETAIL** 1 CO.2



SCL **SEDIMENT CONTROL LOG** 2 CO.2

### SEDIMENT CONTROL LONG INSTALLATION NOTES:

- SEE PLAN VIEW FOR LOCATION AND EXTENT OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

### SEDIMENT CONTROL LOG MAINTENANCE:

- THE SEDIMENT CONTROL LOGS SHALL BE INSPECTED DAILY, DURING AND AFTER ANY STORM EVENT, AND REPAIRED OR HAVE ANY UPSTREAM SEDIMENT REMOVED.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
- ALL SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE ACCEPTABLY STABILIZED.

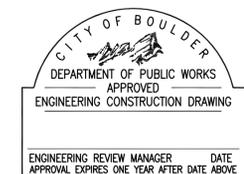
Date: 07.25.2011

Project Name:  
910 28TH STREET  
Issued For / Phase:  
Building Permit &  
Tech Docs

Drawn: JMA

Revisions:

TECH DOC 2nd SUBMITTAL  
8/26/2011



Sheet Name:  
SWMP AND EROSION  
CONTROL DETAILS

Sheet Number:

C1.2

CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

WATER/SEWER \_\_\_\_\_  
TRANSPORTATION \_\_\_\_\_  
DRAINAGE \_\_\_\_\_



**910 28TH STREET**  
BOULDER, CO 80303

2011 Shears Adkins Rockmore

Date: 07.25.2011

Project Name:  
**910 28TH STREET**  
Issued For / Phase:  
**Building Permit & Tech Docs**

Drawn: JMA

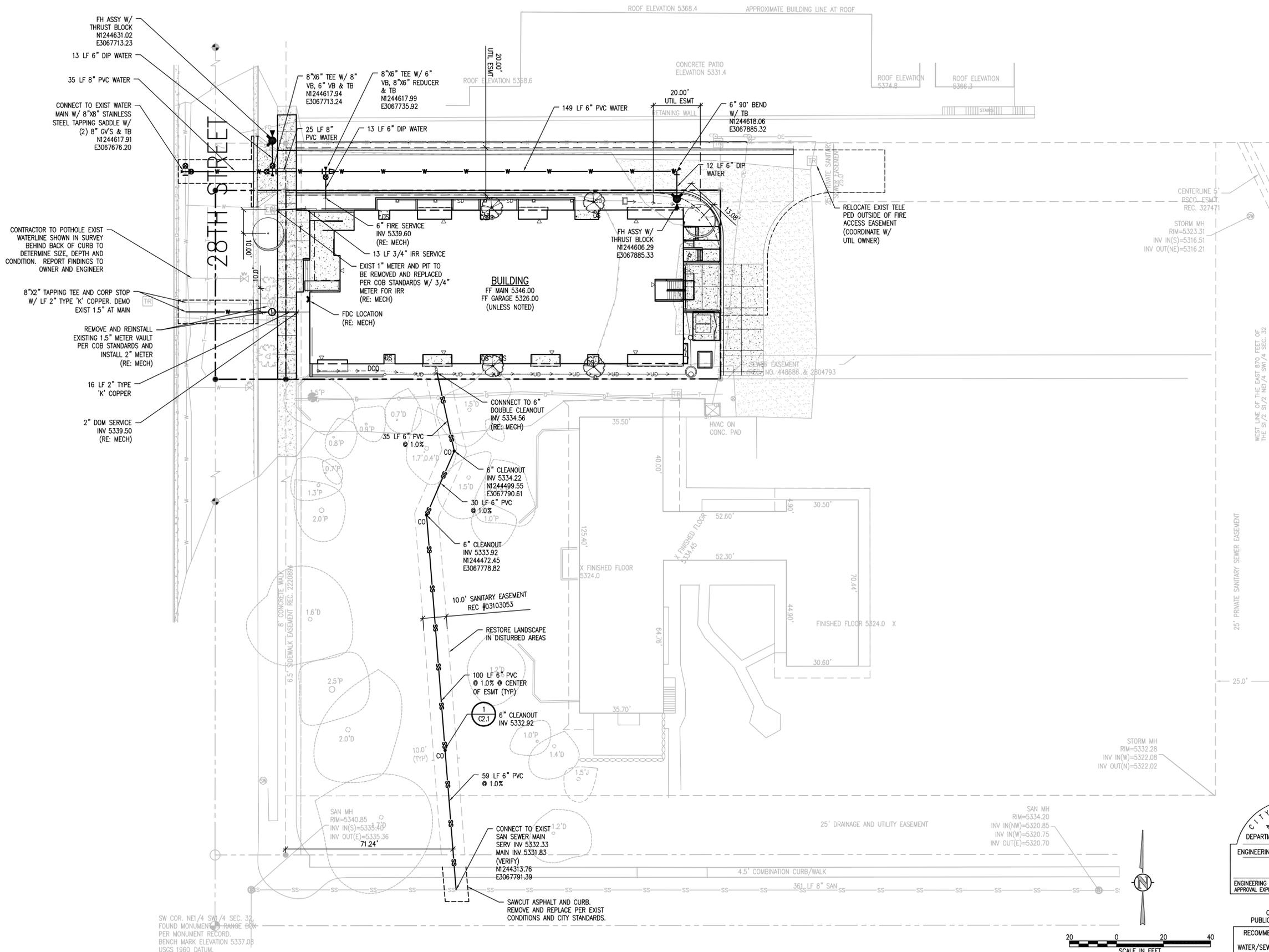
Revisions:

TECH DOC 2nd SUBMITTAL  
8/26/2011

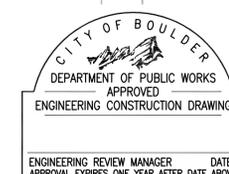
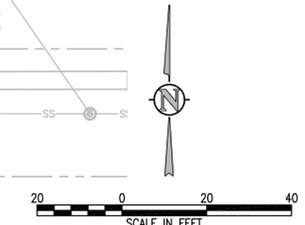
Sheet Name:  
**UTILITY PLAN**

Sheet Number:

**C2.0**



SW COR. NE1/4 SW1/4 SEC. 32  
FOUND MONUMENT RANGE BOX  
PER MONUMENT RECORD.  
BENCH MARK ELEVATION 5337.09  
USGS 1960 DATUM.



CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

WATER/SEWER	_____
TRANSPORTATION	_____
DRAINAGE	_____

PAVEMENT, (MIN THICKNESS 6'') OR MATCH EXISTING DEPTH WHICHEVER IS GREATER

18" MIN

6"

30" MIN DEPTH 48" MAX

FLOWABLE FILL (REQUIRED UNDER PAVED SURFACES)

UTILITY PIPE OR CABLE (GAS, ELECTRIC, TELECOMMUNICATION)

16" OR LESS

CONCRETE ENCASEMENT (WHERE REQUIRED BY THE SPECIFICATIONS)

NOTE: IF TRENCH WIDTH IS WIDER THAN 16" USE UTILITY TRENCH DRAWING NO. 4.02

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**UTILITY TRENCH 16'' OR LESS**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 4.01

42" MINIMUM FINAL PAVEMENT WIDTH, ROTOMILLING IS AN ACCEPTABLE ALTERNATIVE TO MINIMUM PAVEMENT WIDTH

IN OPEN FIELD | IN STREET

NEW STREET SURFACE AS SPECIFIED, 6" MIN OR MATCH EXIST

UNIFORM CUT LINE ASPHALT/CONCRETE

EXISTING STREET SURFACE

COMPACTED BACKFILL AS SPECIFIED

SAWCUT 6" BEYOND TRENCH WALL EACH SIDE PRIOR TO PAVING

COVER AS SPECIFIED

WIDTH SEE TABLE

12"

FOR TRENCHES GREATER THAN 5 FEET IN DEPTH, SIDEWALLS SHALL BE SLOPED AT 45° ANGLE OR SUITABLY BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKERS AND THE PROTECTION OF OTHER UTILITIES AS REQUIRED BY OSHA.

SEE BEDDING DETAIL DRAWING NO. 4.03

**TYPICAL TRENCH SECTION**

NOTES:

- PAVING SHALL COMPLY WITH CITY OF BOULDER SPECIFICATIONS.
- MINIMUM COVER TO BE BELOW OFFICIAL STREET GRADE.
- MINIMUM DISTANCE BETWEEN EDGE OF TRENCH AND EDGE OF ASPHALT, OR LIP OF CURBLINE, SHALL BE 3 FEET.
- REFER TO DRAWING NO. 4.04 FOR PAVEMENT RESTORATION FOR PAVEMENT LESS THAN 3 YEARS OLD.
- ON STATE HIGHWAYS, REFER TO CDOT UTILITY REQUIREMENTS.

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
12"	2'-0"	3'-0"
16"	2'-4"	3'-4"
20"	2'-8"	3'-8"
24"	3'-0"	4'-0"

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**UTILITY TRENCH WIDER THAN 16''**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 4.02

FINISHED GRADE

SEWER ABOVE WATER ALWAYS PROVIDE PROTECTION

PROVIDE PROTECTION AS DETAILED BELOW IF THIS DIMENSION IS LESS THAN 18"

SECTION

SEWER LINE

PLAN

ADAPTOR COUPLINGS (WATER TIGHT FLEXIBLE COUPLINGS CONFORMING TO ASTM C-425 BANNED WITH TWO SERIES 300 STAINLESS STEEL BANDS EACH)

10" MIN

10" MIN

REPLACE SEWER LINE W/ AWWA C-900 CLASS 200 PVC OR AWWA C-150 CLASS 52 DUCTILE IRON PIPE IF WATER LINE PROTECTION IS REQUIRED, (SEE ABOVE)

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**SEWER CROSSING**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 5.02

MECHANICAL JOINT RESTRAINT

WEDGE DETAIL

BOLT HOLE DETAIL

DIMENSIONS

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
4"	4	2				
6"	6	3	11.12	9.50	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25

NOTE: REFER TO MS-28 OR SECTION 6.05 PARAGRAPH D. IN THE DENVER WATER DEPARTMENT SPECIFICATIONS.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**MECHANICAL JOINT RESTRAINT DETAILS**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 5.09

TOP OF VALVE BOX SHALL BE SET 1/8" - 1/4" BELOW SURROUNDING ASPHALT

"WATER" CAST IN TOP OF VALVE BOX COVER

PAVED SURFACE OR FINAL GRADE

6"

SURFACE ELEVATION

VALVE BOX SHALL BE SCREWED DOWN AND BURIED 6" BELOW GRADE IF INSTALLED IN A NONPAVED ROADWAY

BACKFILL TO BE HAND PLACED AND COMPACTED

4" MIN

4" MIN

2" OPERATING NUT

3 - PIECE VALVE BOX

VALVE

PLACE 3/4" OR 1 1/2" WASHED ROCK AROUND VALVE TO TOP OF VALVE BONNET

NOTES:

- OPERATING NUT SHALL BE EXTENDED WITHIN 4 FEET OF SURFACE.
- EXTENSION STEMS REQUIRED WHERE VALVE IS AT DEPTH GREATER THAN 5 FEET.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**VALVE BOX**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 5.11

18" MIN

2' MIN

5' MAX

18" MIN

SIDEWALK

CURB AND GUTTER

BURY LINE

4" MIN

CONCRETE REACTION BLOCK

UNDISTURBED MATERIAL

BOND BREAKER TO PREVENT REACTION BLOCK FROM BLOCKING DRAIN HOLES

FLAGSTONE OR CONCRETE BLOCK

1/3 CUBIC YD

1 1/2" GRAVEL OR CRUSHED ROCK

1" MIN

18" MIN

3' MAX

CURB/WALK

BURY LINE

NOTE: FOR FIRE HYDRANT INSTALLATION, SEE DETAIL DRAWING NO. 5.13.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**FIRE HYDRANT PLACEMENT**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 5.12

UNDISTURBED SOIL

BOND BREAKER (TYP)

BEARING SURFACE

DEAD END

UNDISTURBED SOIL

TEE

BEARING SURFACE

UNDISTURBED SOIL

2/3 PIPE OD

UNDISTURBED SOIL

BEARING SURFACE

BEDDING MATERIAL

UNDISTURBED SOIL

11 1/4", 22 1/2", 45° AND 90° BENDS

MINIMUM BEARING SURFACE AREA IN SQUARE FEET

SIZE	TEE AND PLUG	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	2.0	2.5	1.5	1.0	1.0
6"	4.0	5.5	3.0	1.5	1.0
8"	6.5	9.0	5.0	2.5	1.5
10"	10.0	14.0	7.5	4.0	2.0
12"	14.0	20.0	11.0	5.5	3.0
14"	19.0	27.0	14.5	7.5	4.0
16"	25.0	35.0	19.0	10.0	5.0
18"	31.5	44.5	24.0	12.5	6.5
20"	38.0	54.5	29.5	15.0	7.5
24"	55.5	78.5	42.5	22.0	11.0

NOTES:

- BASED ON 250 PSI MAXIMUM PRESSURE AND 2000 LBS/FT<sup>2</sup> BEARING CAPACITY.
- ALL FITTINGS MUST BE WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO BOLTS OR PIPES.
- MAXIMUM JOINT DEFLECTION WITHOUT REACTION BLOCK IS 1+1/2".
- CONCRETE SHALL DEVELOP 3,000 PSI AT 28 DAYS.
- JOINTS AND BOLTS SHALL BE ACCESSIBLE FOR REPAIRS.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**HORIZONTAL THRUST BLOCK**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 5.14

CAST IRON COVER IN PAVEMENT AND LANDSCAPE AREAS BRASS COVER IN WALKS AND PLAZAS

CIRCULAR #4 REBAR

PLAN VIEW

CONC COLLAR IN LANDSCAPE AREAS ONLY

6"

2" CLR

CAST IRON FRAME AND COVER

THREADED ADAPTOR AND CAP 4" BELOW BOTTOM OF COVER

SAME DIAMETER AS SERVICE LINE

PLUG IF TERMINUS CLEANOUT

MIRROR LINE FOR DOUBLE CLEANOUT

SERVICE LINE

CONCRETE CRADLE TO SPRING LINE FULL TRENCH WIDTH

COMPACTED GRANULAR BEDDING

FLOW

**SANITARY CLEANOUT DETAIL**

NTS

CITY OF BOULDER  
DEPARTMENT OF PUBLIC WORKS  
APPROVED  
ENGINEERING CONSTRUCTION DRAWING

ENGINEERING REVIEW MANAGER DATE APPROVAL EXPIRES ONE YEAR AFTER DATE ABOVE

CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

WATER/SEWER \_\_\_\_\_  
TRANSPORTATION \_\_\_\_\_  
DRAINAGE \_\_\_\_\_

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

**HORIZONTAL THRUST BLOCK**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000

DRAWING NO. 5.14

**PLAN**  
TEE TYPE SERVICE CONNECTION  
WYE SERVICE TAP  
90°  
MINIMUM TRENCH WIDTH SHALL BE THE DIAMETER OF THE PIPE PLUS 8"

**CROSS SECTION**  
14" MIN  
14" MIN  
SEE NOTE 3

**PROFILE**  
11 1/4" BEND  
SANITARY SEWER MAIN  
MIN 1/4" PER FT  
45°  
TABLE NO. 1

TABLE NO. 1		
VERTICAL DISTANCE FROM FLOWLINE OF MAIN TO FLOWLINE OF SERVICE LINE		
MAIN SIZE	SERVICE	SERVICE
8"	6"	10"
10"	11"	12"
12"	12"	13"
15"	15"	16.5"

**MARKER POST (AT SERVICE STUB OUT)**  
GREEN FLAGGING OR PAINTED GREEN  
2" MIN  
18" MIN  
3" MIN  
EXIST GROUND SURFACE  
#4 REBAR OR WOOD 2"x4" OR 4"x4"

**NOTES:**  
1. ALL SERVICE LINES SHALL BE 4" MINIMUM IN DIAMETER.  
2. THE MINIMUM SLOPE FOR 4" OR 6" SERVICE LINES SHALL BE 1/4" PER FOOT.  
3. BEDDING FOR HOUSE CONNECTION WITHIN CITY ROW SHALL BE THE SAME AS FOR SEWER MAIN, LAID TO A MINIMUM DEPTH OF 4" BELOW THE PIPE INVERT AND 4" ABOVE THE TOP OF THE PIPE.  
4. ALL TAPS ARE TO BE MADE BY THE CITY OF BOULDER, UNLESS OTHERWISE AUTHORIZED BY THE UTILITY DIVISION.  
5. SERVICE LINES LARGER THAN 6" MUST BE CONNECTED TO THE MAIN AT A MANHOLE.  
6. SERVICE LINE WILL BE PLUGGED AT THE PROPERTY LINE WITH APPROPRIATE PLUG FOR TYPE OF LINE INSTALLED UNTIL CONNECTED TO BUILDING. AFTER ABANDONMENT OF A SERVICE LINE IT MUST BE PLUGGED 5' INSIDE THE PROPERTY LINE.  
7. COMPACTION OF BACKFILL SHALL BE AS STATED IN THE CITY OF BOULDER, STANDARD SPECIFICATIONS.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO  
**SEWER SERVICE LINE**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000  
DRAWING NO. 6.06

**NOTES:**  
1. SHOULD ANY SITUATION ARISE OTHER THAN SHOWN CONCERNING THE DEPTH OR OBSTRUCTION OF SERVICE LINE OR PLACEMENT OF METER PIT, CALL CITY OF BOULDER ROW INSPECTOR.  
2. METER TO BE PLACED IN PUBLIC ROW OR EASEMENT. **DO NOT PLACE IN SIDEWALK OR DRIVE.**  
3. PLACEMENT OF METER PIT SHALL BE 3' FROM CENTERLINE OF LID TO BACK EDGE OF CURB/WALK OR IF SIDEWALK IS SEPARATE FROM CURB, METER PIT SHALL BE INSTALLED ON STREET SIDE OF WALK 3' FROM FRONT SIDE OF WALK.  
4. METER, METER PIT FITTINGS, AND LID WITH 36" FLANGE FITTINGS SHALL BE PURCHASED FROM THE CITY OF BOULDER.  
5. METER SHALL BE INSTALLED BY THE CITY.  
6. CORPORATION STOP AND DOUBLE STRAP BRONZE SERVICE SADDLE REQUIRED FOR PVC WATER MAINS.

**PROFILE**  
LID FOR METER PIT SHALL BE INSTALLED AND MAINTAINED LEVEL WITH THE ADJACENT GROUND AND SEE DRAWING NO. 5.17B FOR METER PIT DETAIL  
CURB, GUTTER AND SIDEWALK  
PAVEMENT  
INSULATING COUPLING REQUIRED WITH METALLIC WATER MAINS  
4'-6" MIN  
45°  
CORPORATION STOP  
WATER MAIN  
SHUT OFF VALVE SHALL BE PERPENDICULAR TO THE STRUCTURE OR PROPERTY BEING SERVED  
9" OF 1 1/2" WASHED ROCK  
OWNER'S SERVICE LINE AND RESPONSIBILITY  
SEE METER DETAIL 5.17C  
MIN 4'-6" MAX 5'

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO  
**STANDARD 1 1/2" - 2" SERVICE**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000  
DRAWING NO. 5.17A

**PROFILE**  
SEE DRAWING NO. 5.18D FOR ADJUSTMENT DETAIL, IF REQUIRED  
7 1/2"  
8"  
30"  
5'31/2"  
3'4"  
8"  
9" OF 1 1/2" WASHED ROCK  
4' ID  
8" HOLE FOR SERVICE LINE  
SERVICE LINE HOLE TO BE CLOSED WITH 1 1/2" WASHED ROCK AND GROUT BEFORE BACKFILLING  
8" HOLE FOR SERVICE LINE

**PLAN**  
6"x6" MESH  
#4 REBARS ON 12" CENTER  
30°  
8" SERVICE LINE  
OPENING IN PRECAST TOP  
8" SERVICE LINE

NOTE: PRECAST CONCRETE STRUCTURES SHALL MEET ASTM C-478.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO  
**STANDARD METER PIT 1 1/2"-2" SERVICE**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000  
DRAWING NO. 5.17B

**METER DETAIL**  
OUTLET  
13 1/8"  
1 1/2" METER  
2" METER  
17 1/8"  
INLET  
PACK JOINT COUPLING  
ORISEAL VALVE  
VALVE  
COPPER IRON PIPE ADAPTER  
2-1" CLASS 40 PVC PIPE 18" LONG (EA) THROUGH BRACE EYE SUPPORTS  
TO HOUSE  
TO CITY MAIN

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO  
**STANDARD 1 1/2" - 2" METER SETTING**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000  
DRAWING NO. 5.17C

**NOTES:**  
1. SHOULD ANY SITUATION ARISE OTHER THAN SHOWN CONCERNING THE DEPTH OR OBSTRUCTION OF SERVICE LINE OR PLACEMENT OF METER PIT, CALL THE CITY OF BOULDER ROW INSPECTOR.  
2. METERS TO BE PLACED IN PUBLIC ROW OR EASEMENT. **DO NOT PLACE IN SIDEWALK OR DRIVE.**  
3. PLACEMENT OF METER PIT SHALL BE 2' FROM CENTERLINE OF LID TO BACK EDGE OF CURB/WALK. IF SIDEWALK IS SEPARATE FROM CURB, METER PIT SHALL BE INSTALLED ON STREET SIDE OF WALK 2' FROM FRONT SIDE OF WALK.  
4. METER, LID, VALVE & FITTINGS SHALL BE PURCHASED FROM THE CITY OF BOULDER.  
5. METER SHALL BE INSTALLED BY CITY.  
6. CORPORATION STOP AND DOUBLE STRAP BRONZE SERVICE SADDLE REQUIRED FOR PVC WATER MAINS.

**PROFILE**  
LID FOR METER PIT SHALL BE INSTALLED AND MAINTAINED LEVEL WITH THE EXISTING GROUND IN A DEVELOPED AREA OR FUTURE GROUND LEVEL AS DETERMINED BY DEVELOPMENT GRADING PLAN  
SHUTOFF VALVE SHALL BE PERPENDICULAR TO THE STRUCTURE OR PROPERTY BEING SERVED  
CURB, GUTTER AND SIDEWALK  
PAVEMENT  
CORPORATION STOP  
4'-6" MIN  
45°  
WATER MAIN  
INSULATING COUPLING REQUIRED WITH METALLIC WATER MAINS  
SERVICE PIPE SHALL BE TYPE "K" COPPER FROM MAIN THROUGH THE METER PIT. NO SWEAT JOINTS SHALL BE ALLOWED.  
ADD 6" OF 1 1/2" WASHED ROCK IF OVEREXCAVATED  
4" BRICK SUPPORT ON UNDISTURBED SOIL  
OWNER'S SERVICE LINE AND RESPONSIBILITY  
MIN 15" MAX 17"

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO  
**STANDARD 3/4" - 1" SERVICE**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000  
DRAWING NO. 5.16A

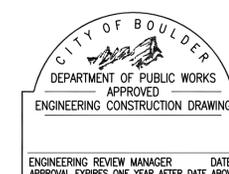
**METER PIT PLAN**  
SEE DETAIL DRAWING NO. 5.16A FOR PROFILE VIEW  
NOTCH PIT AND FOLD BACK WHERE COPPER ENTERS AND LEAVES PIT  
METER YOKE MUST BE PERPENDICULAR TO STRUCTURE OR PROPERTY BEING SERVED  
BRICK SUPPORT UNDER PIT  
90°  
20"  
CMP  
WATER MAIN

**NOTES:**  
1. METERS TO BE PLACED IN PUBLIC ROW OR EASEMENT. **DO NOT PLACE IN SIDEWALK OR DRIVE.**  
2. SHOULD ANY SITUATION ARISE OTHER THAN SHOWN CONCERNING THE DEPTH OR OBSTRUCTION OF SERVICE LINE OR THE PLACEMENT OF METER PIT, CALL THE CITY OF BOULDER ROW INSPECTOR.

DRAWN BY: JSH  
CHECKED BY: RJH  
APPROVED BY: DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO  
**STANDARD METER PIT 3/4" - 1" SERVICES**

ISSUED: JULY 2, 1998  
REVISED: OCT. 17, 2000  
DRAWING NO. 5.16B

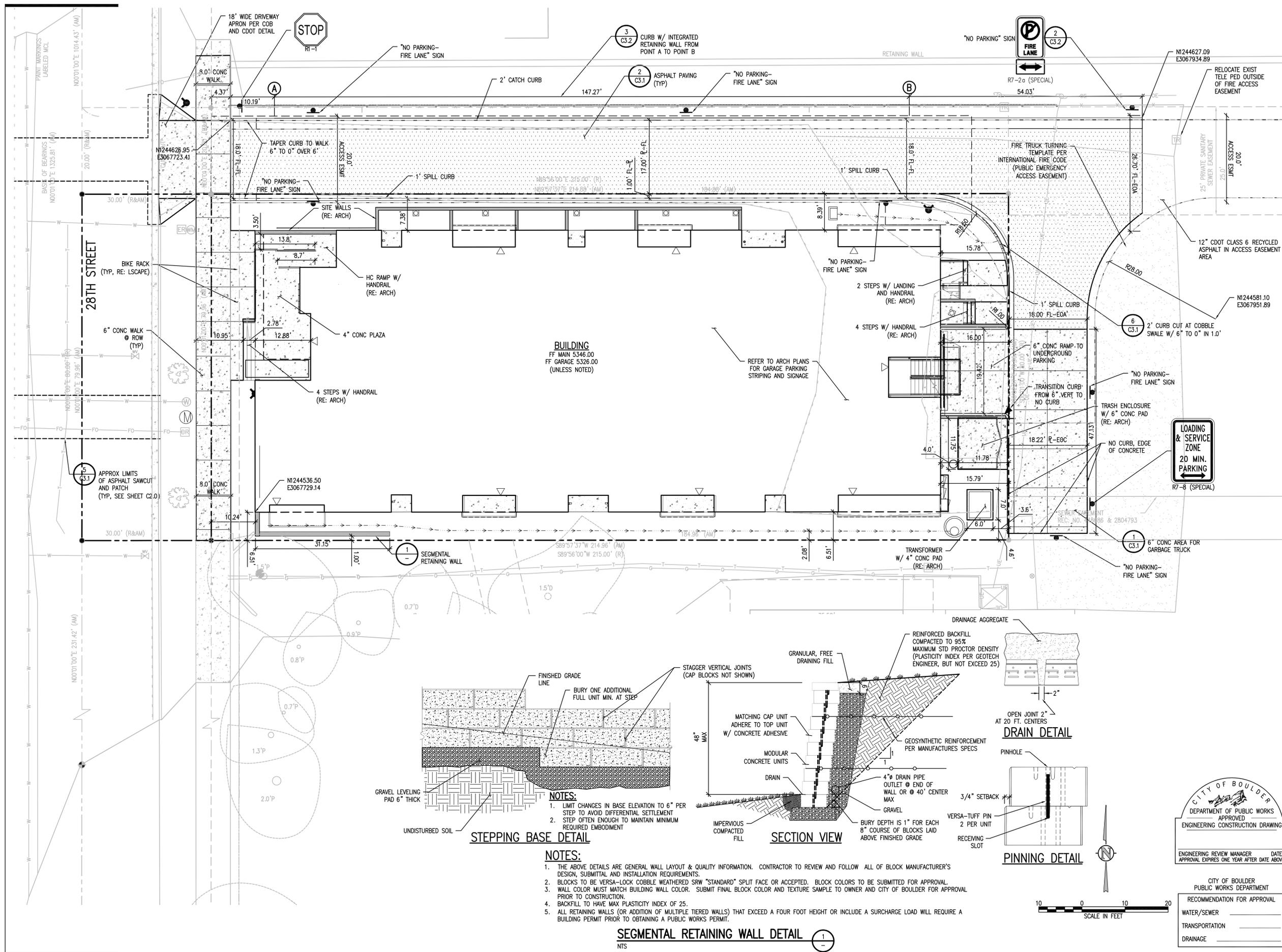


CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

WATER/SEWER \_\_\_\_\_  
TRANSPORTATION \_\_\_\_\_  
DRAINAGE \_\_\_\_\_

**910 28TH STREET**  
BOULDER, CO 80303

2011 Shears Adkins Rockmore



**NOTES:**  
1. LIMIT CHANGES IN BASE ELEVATION TO 6" PER STEP TO AVOID DIFFERENTIAL SETTLEMENT  
2. STEP OFTEN ENOUGH TO MAINTAIN MINIMUM REQUIRED EMBODIMENT

**NOTES:**  
1. THE ABOVE DETAILS ARE GENERAL WALL LAYOUT & QUALITY INFORMATION. CONTRACTOR TO REVIEW AND FOLLOW ALL OF BLOCK MANUFACTURER'S DESIGN, SUBMITTAL AND INSTALLATION REQUIREMENTS.  
2. BLOCKS TO BE VERSA-LOCK COBBLE WEATHERED SRW "STANDARD" SPLIT FACE OR ACCEPTED. BLOCK COLORS TO BE SUBMITTED FOR APPROVAL.  
3. WALL COLOR MUST MATCH BUILDING WALL COLOR. SUBMIT FINAL BLOCK COLOR AND TEXTURE SAMPLE TO OWNER AND CITY OF BOULDER FOR APPROVAL PRIOR TO CONSTRUCTION.  
4. BACKFILL TO HAVE MAX PLASTICITY INDEX OF 25.  
5. ALL RETAINING WALLS (OR ADDITION OF MULTIPLE TIERED WALLS) THAT EXCEED A FOUR FOOT HEIGHT OR INCLUDE A SURCHARGE LOAD WILL REQUIRE A BUILDING PERMIT PRIOR TO OBTAINING A PUBLIC WORKS PERMIT.

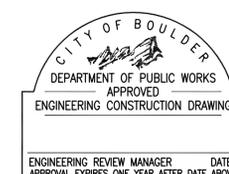
**SEGMENTAL RETAINING WALL DETAIL**

Date: 07.25.2011

Project Name:  
**910 28TH STREET**  
Issued For / Phase:  
**Building Permit & Tech Docs**

Drawn: JMA  
Revisions:

TECH DOC 2nd SUBMITTAL  
8/26/2011

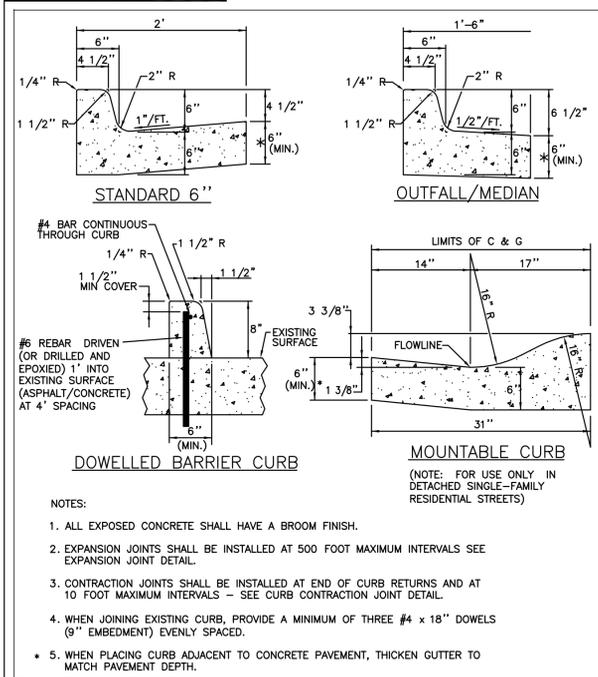


ENGINEERING REVIEW MANAGER DATE APPROVAL EXPIRES ONE YEAR AFTER DATE ABOVE

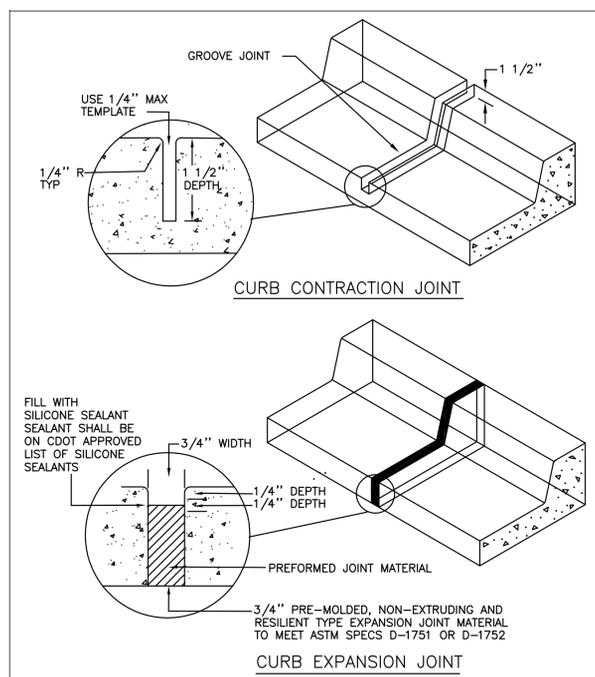
CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

WATER/SEWER	_____
TRANSPORTATION	_____
DRAINAGE	_____

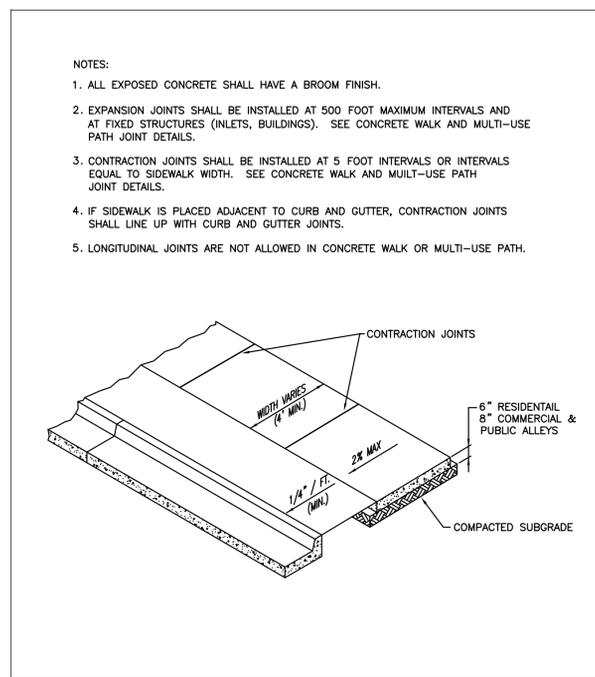
Sheet Name:  
**SITE AND HORIZONTAL CONTROL PLAN**  
Sheet Number:  
**C3.0**



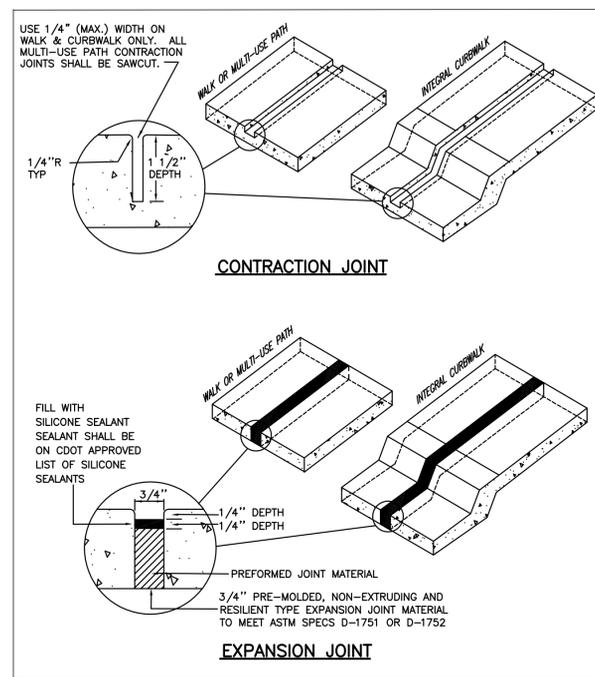
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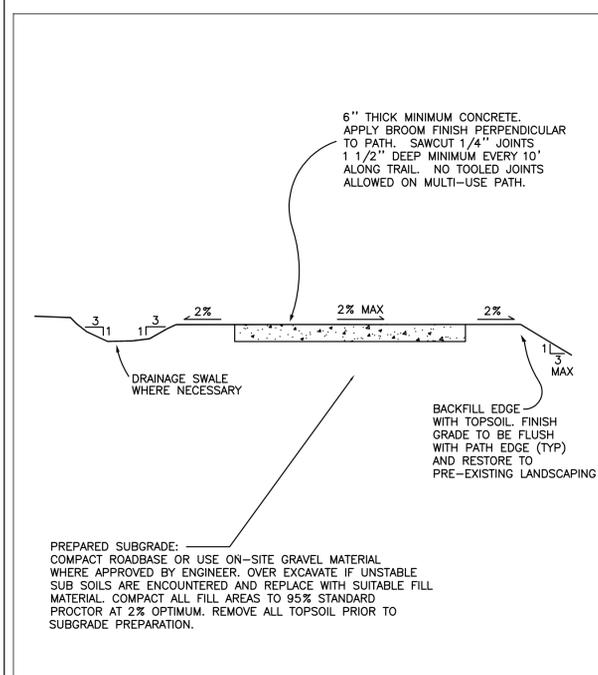
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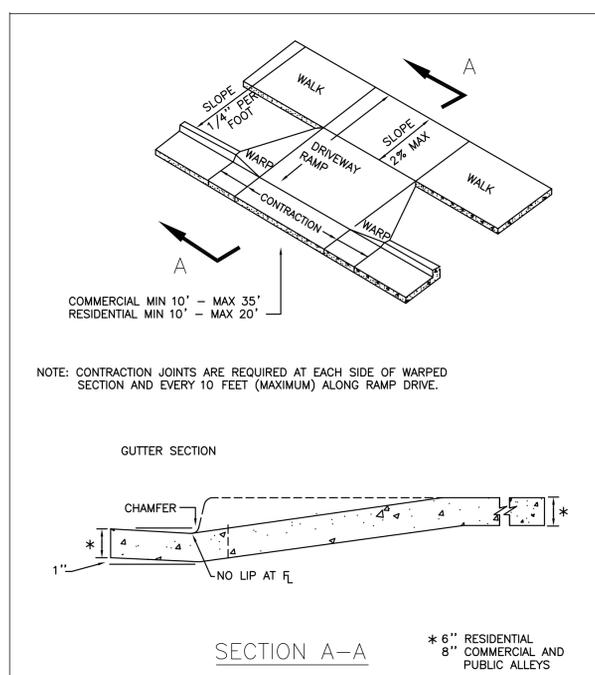
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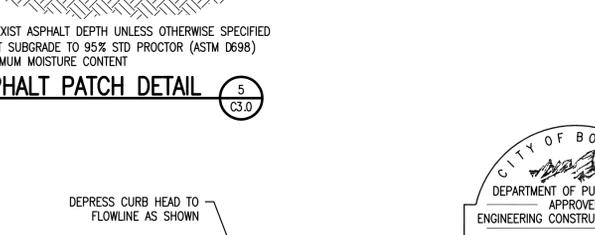
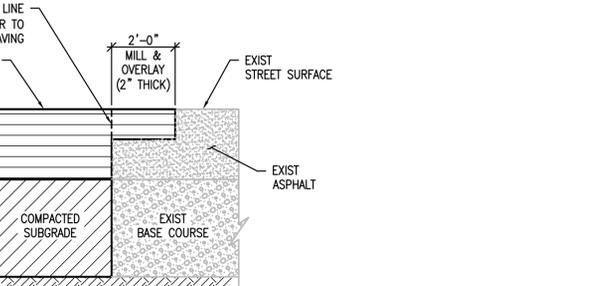
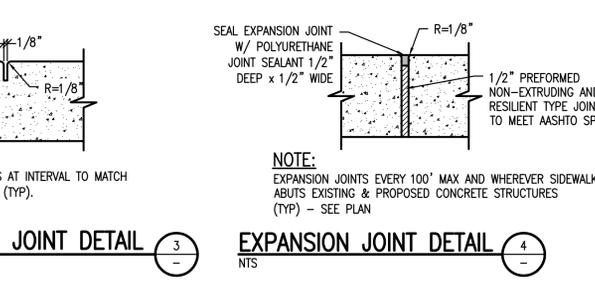
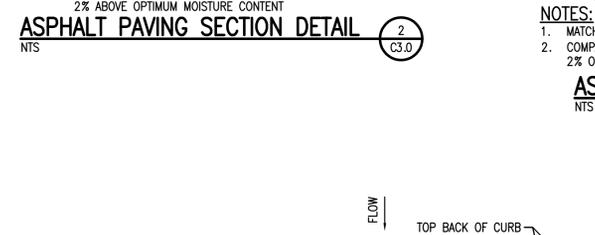
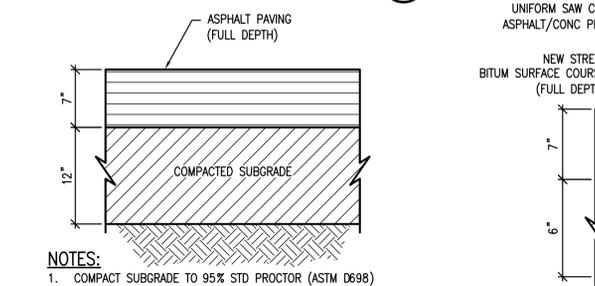
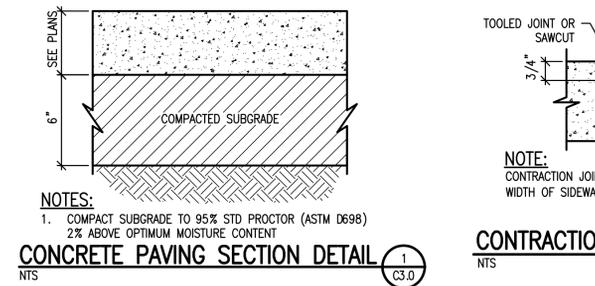
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DRAWN BY: JSH CHECKED BY: RJH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO <b>MULTI-USE PATH SECTION DETAIL</b>	ISSUED: JULY 2, 1998 REVISED: OCT 6, 2009 DRAWING NO. <b>2.02.D</b>
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DRAWN BY: JSH CHECKED BY: WGH APPROVED BY: DIRECTOR OF PUBLIC WORKS	CITY OF BOULDER, COLORADO <b>DRIVEWAY RAMP DETACHED WALK</b>	ISSUED: JULY 2, 1998 REVISED: OCT 6, 2009 DRAWING NO. <b>2.21</b>
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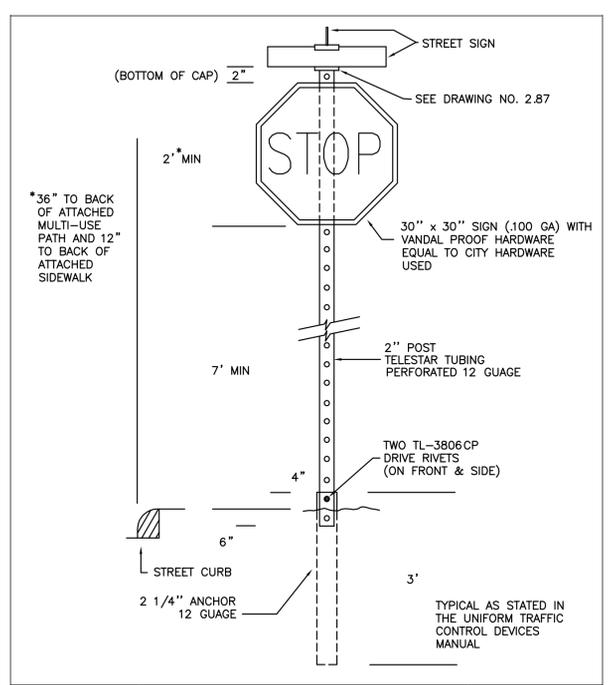


CITY OF BOULDER  
DEPARTMENT OF PUBLIC WORKS  
APPROVED  
ENGINEERING CONSTRUCTION DRAWING

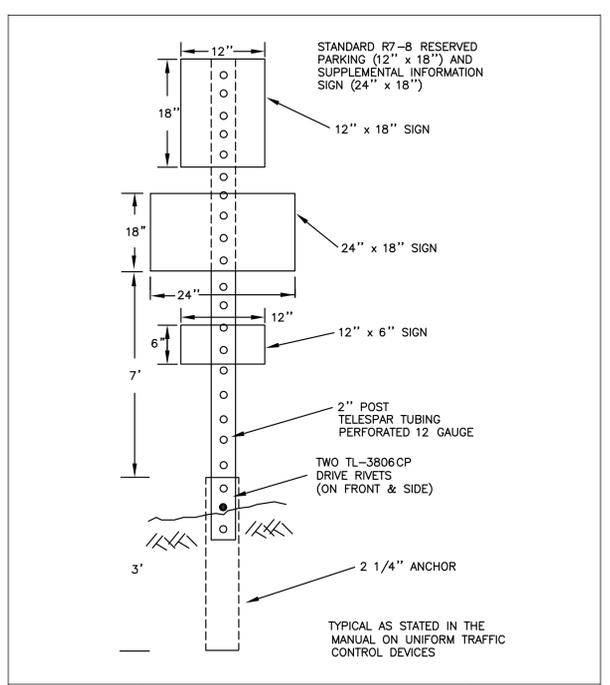
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CITY OF BOULDER  
PUBLIC WORKS DEPARTMENT  
RECOMMENDATION FOR APPROVAL

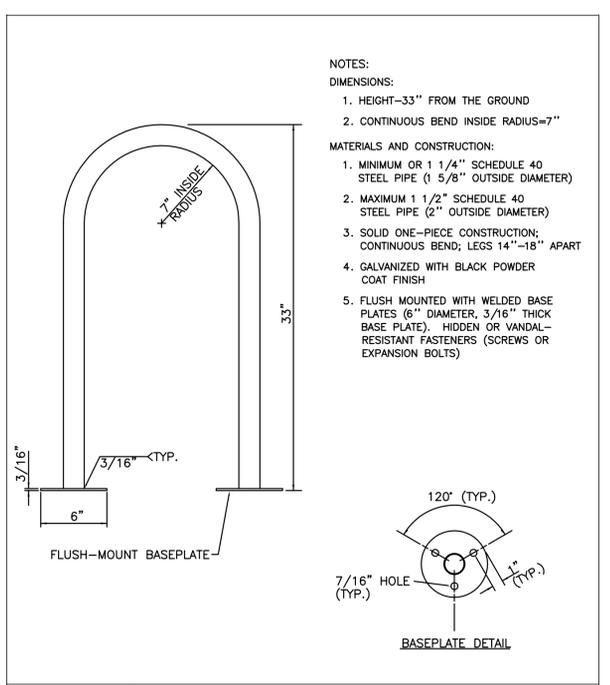
WATER/SEWER \_\_\_\_\_  
TRANSPORTATION \_\_\_\_\_  
DRAINAGE \_\_\_\_\_



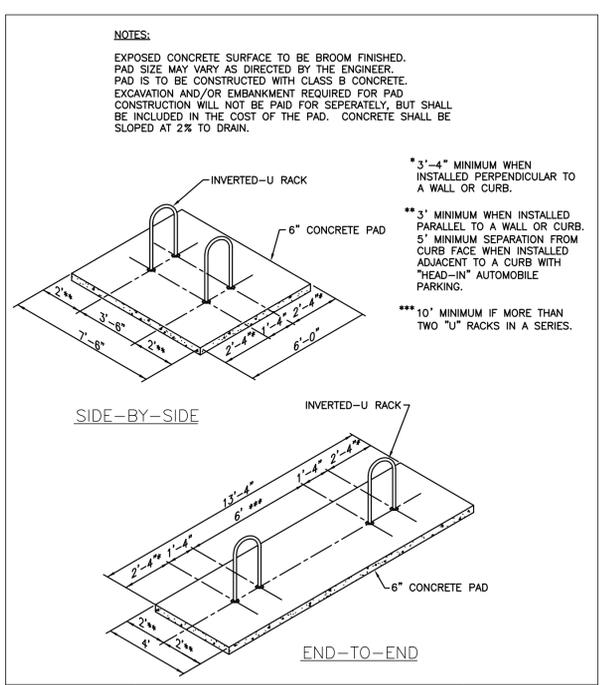
ISSUED: JULY 2, 1998  
REVISED: OCT 6, 2009  
DRAWING NO. 2.81  
CITY OF BOULDER, COLORADO  
**SIGN INSTALLATION DETAILS**



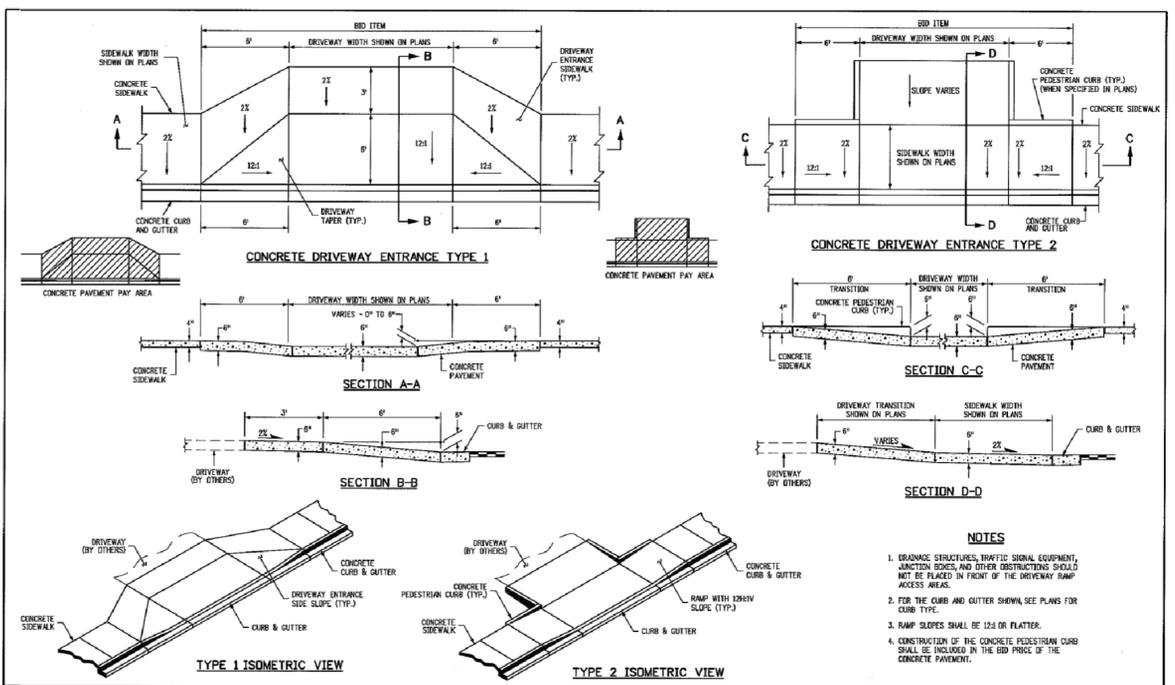
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REVISED: OCT 6, 2009  
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CITY OF BOULDER, COLORADO  
**ACCESSIBLE PARKING SIGN DETAILS**



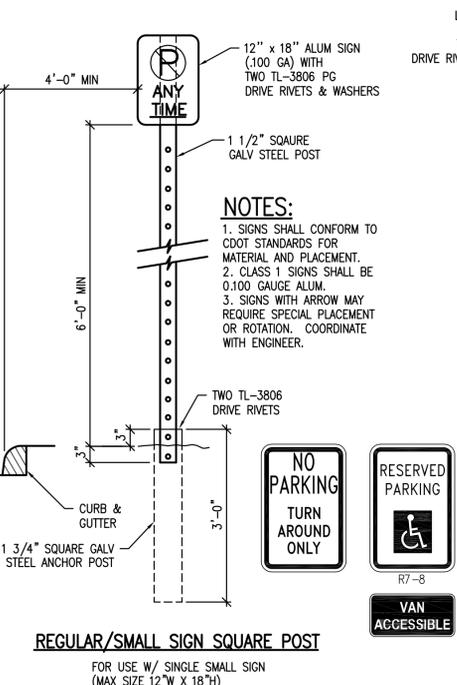
ISSUED: JULY 2, 1998  
REVISED: OCT 6, 2009  
DRAWING NO. 2.52.A  
CITY OF BOULDER, COLORADO  
**INVERTED "U" BICYCLE RACKS**



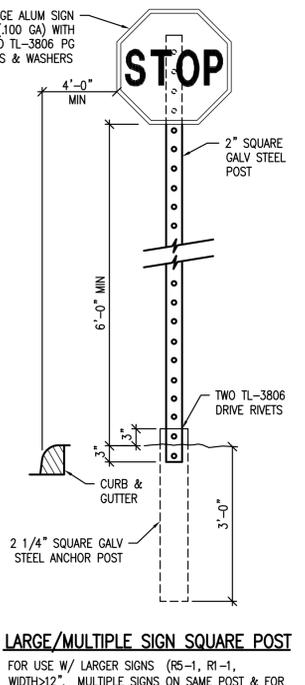
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DRAWING NO. 2.52.B  
CITY OF BOULDER, COLORADO  
**INVERTED "U" BICYCLE RACKS**



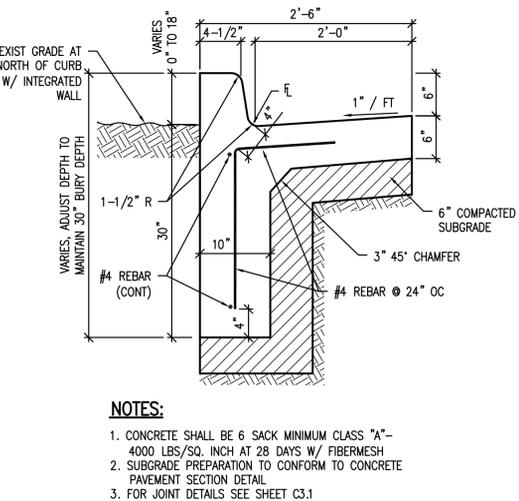
Colorado Department of Transportation  
4201 East Arkansas Avenue  
Denver, Colorado 80222  
Phone: (303) 757-9083  
Fax: (303) 757-9030  
Project Development Branch DD/LTA  
Issued By: Project Development Branch on July 04, 2008  
**CURB, GUTTERS, AND SIDEWALKS**  
STANDARD PLAN NO. M-609-1  
Sheet No. 3 of 4



FOR USE W/ SINGLE SMALL SIGN  
(MAX SIZE 12"W X 18"H)



FOR USE W/ LARGER SIGNS (R5-1, R1-1,  
WIDTH>12", MULTIPLE SIGNS ON SAME POST & FOR  
ALL SIGNS IN WALKS, CONCRETE AREAS, ETC.)



NOTES:  
1. CONCRETE SHALL BE 6 SACK MINIMUM CLASS "A"-  
4000 LBS/SQ. INCH AT 28 DAYS W/ FIBERMESH  
2. SUBGRADE PREPARATION TO CONFORM TO CONCRETE  
PAVEMENT SECTION DETAIL  
3. FOR JOINT DETAILS SEE SHEET C3.1

**DRIVEWAY APRON DETAILS**  
NTS

**DRIVEWAY APRON DETAILS**  
NTS

**REGULAR/SMALL SIGN SQUARE POST**  
NTS

**LARGE/MULTIPLE SIGN SQUARE POST**  
NTS

**CURB AND GUTTER W/ INTEGRATED RETAINING WALL DETAIL**  
NTS

Computer File Information		Sheet Revisions	
Creation Date: 07/04/08	Issue: 010	Date:	Comments:
Last Modification Date: 07/09/09	Issue: LTA		
Full Path: www.dot.state.co.us/DesignSupport/			
Drawing File Name: 609030304.dgn			
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English	

CITY OF BOULDER	
DEPARTMENT OF PUBLIC WORKS	APPROVED
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CITY OF BOULDER	PUBLIC WORKS DEPARTMENT
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WATER/SEWER	_____
TRANSPORTATION	_____
DRAINAGE	_____