

Oversight / NHS

FHWA OVERSIGHT NO YES

NATIONAL HIGHWAY SYSTEM NO YES

FIELD INSPECTION REVIEW
02/28/08

DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO
HIGHWAY CONSTRUCTION BID PLANS OF PROPOSED
FEDERAL AID PROJECT NO. IM 070A-003
INTERSTATE 70
EAGLE, SUMMIT, CLEAR CREEK, JEFFERSON COUNTY
CONSTRUCTION PROJECT CODE NO. 16701

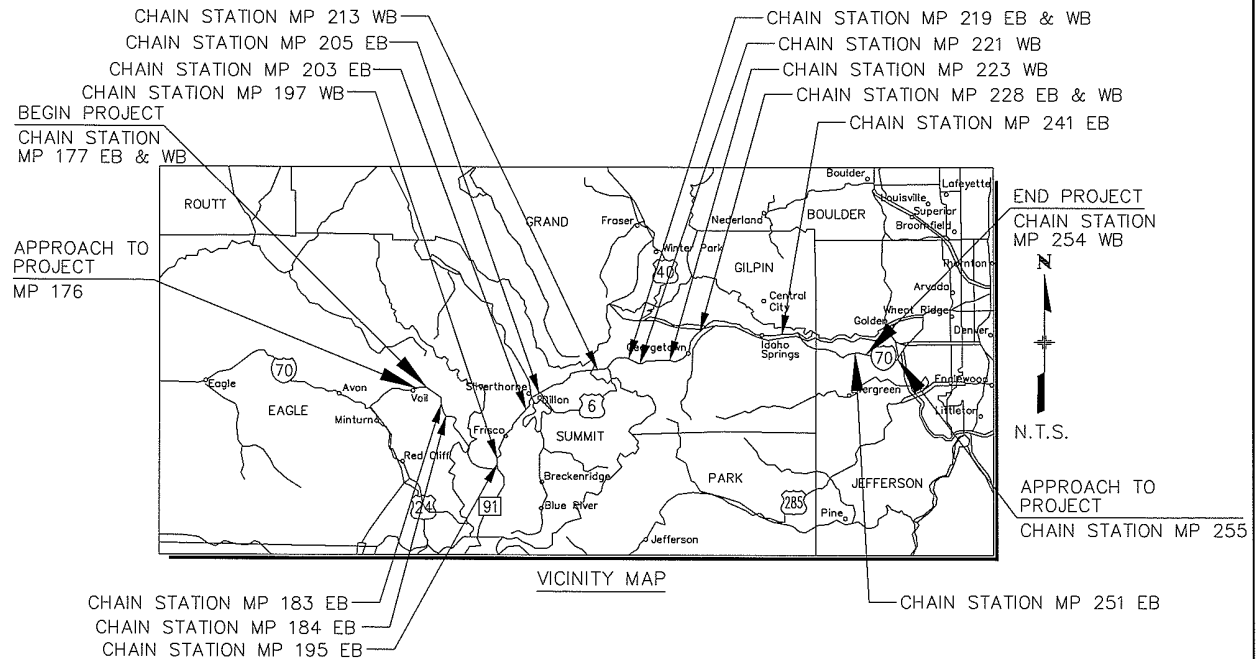
Related Projects:
P. E. UNDER PROJECT:
Project Number - IM 070A-003
Project Code - 16701

R.O.W. Projects
R.O.W. Project Description
Project Number -
Project Code -

TABULATION OF LENGTH & DESIGN DATA

STATION	FEET		MAJOR STA.
	ROADWAY	1-70	
MILEPOST	STA. BEGINNING	STA. END	TOTAL DIST. (FT.)
Approach to Project MP 176			
MP 177 EB	10+00.00	36+50.00	2650.00
MP 183 EB	10+00.00	24+00.00	1400.00
MP 184 EB	10+00.00	23+00.00	1300.00
MP 195 EB	10+00.00	39+00.00	2900.00
MP 196 WB	10+00.00	24+00.00	1400.00
MP 203 EB	10+00.00	17+50.00	750.00
MP 205 EB	10+00.00	17+00.00	750.00
MP 211 WB	10+00.00	19+00.00	900.00
MP 219 EB	10+00.00	27+00.00	1700.00
MP 219 WB	10+00.00	29+00.00	1900.00
MP 221 WB	10+00.00	19+00.00	900.00
MP 223 WB	10+00.00	22+00.00	1200.00
MP 228 EB	10+00.00	38+00.00	2800.00
MP 228 WB	10+00.00	44+00.00	3400.00
MP 243 WB	10+00.00	23+00.00	1300.00
MP 251 WB	10+00.00	19+00.00	900.00
MP 254 WB	10+00.00	23+50.00	1350.00
End of Project MP 254			
TOTAL			27500.0
SUMMARY OF PROJECT LENGTH	FEET	MILES	
ROADWAY (NET LENGTH)	27500.0	5.2	
PROJECT GROSS LENGTH	411,840.0	78.0	

SHEET NO.	TITLE SHEET	DESCRIPTION
1	TITLE SHEET	
2	STANDARD PLANS LIST	
3	TYPICAL SECTIONS	
4	GENERAL NOTES	
5 - 6	SUMMARY OF APPROXIMATE QUANTITIES	
7	TABULATIONS	
8	MILEPOST INFORMATION	
9 - 12	STATION LOCATION PLANS	
13 - 18	BORING DETAILS	
19	SPECIAL LIGHT STANDARD DETAILS	
20 - 21	TELECOMMUNICATIONS	
22 - 45	LIGHTING PLAN	
46 - 50	STORMWATER MANAGEMENT PLAN	
51	TABULATION OF TRAFFIC ENGINEERING ITEMS	
52 - 62	SIGNING PLAN	
63 - 73	FIBER COMMUNICATION PLANS	
74 - 90	CONDUIT PLAN AND SWMP SITE MAP	



Computer File Information		Index of Revisions		As Constructed		Contract Information		Project No./Code	
Creation Date:	02/18/08 Initials: SRB			No. Revisions:		Contractor:		IM 070A-003	
Last Modification Date:	02/25/08 Initials: SRB			Revised:		Resident Engineer:		16701	
Full Path:	S:\Tranproj\100000508\16701\Consultants\Plot_Sets\FIR			Void:		Project Started:		Project Accepted:	
Drawing File Name:	gets_01.dgn					Comments:		Sheet Number: 1	
Scale:	NTS Units: ENGLISH								





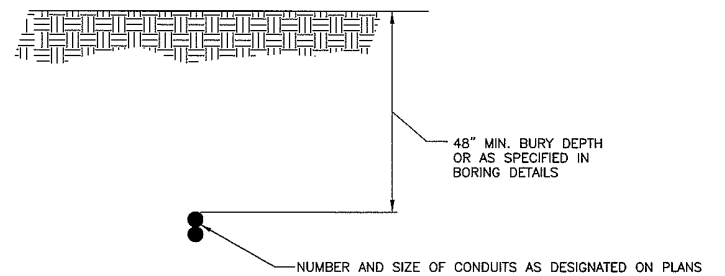
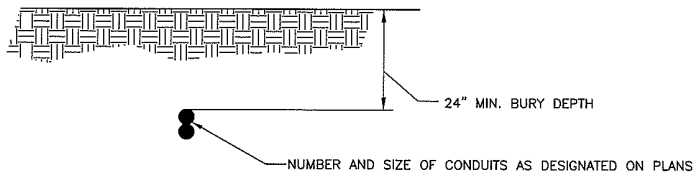
REGION I DW

PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER	PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER	PLAN NUMBER	NEW OR REVISED	S STANDARD TITLE	PAGE NUMBER
<input checked="" type="checkbox"/> M-100-1	<input type="checkbox"/>	STANDARD SYMBOLS (3 SHEETS)	1-3	<input type="checkbox"/> M-607-1	<input type="checkbox"/>	WIRE FENCES AND GATES (3 SHEETS)	84-86	<input checked="" type="checkbox"/> S-612-1	<input type="checkbox"/>	DELINEATOR INSTALLATIONS (5 SHEETS)	131-135
<input type="checkbox"/> M-203-1	<input type="checkbox"/>	APPROACH ROADS	4	<input type="checkbox"/> M-607-2	<input type="checkbox"/>	CHAIN LINK FENCE (3 SHEETS)	87-89	<input checked="" type="checkbox"/> S-614-1	<input type="checkbox"/>	GROUND SIGN PLACEMENT (2 SHEETS)	136-137
<input type="checkbox"/> M-203-2	<input type="checkbox"/>	DITCH TYPES	5	<input type="checkbox"/> M-607-3	<input type="checkbox"/>	BARRIER FENCE	90	<input checked="" type="checkbox"/> S-614-2	<input type="checkbox"/>	CLASS I SIGNS	138
<input type="checkbox"/> M-203-11	<input type="checkbox"/>	SUPERELEVATION CROWNED AND DIVIDED HIGHWAYS (3 SHEETS)	6-8	<input type="checkbox"/> M-607-4	<input type="checkbox"/>	DEER FENCE AND GATES (2 SHEETS)	91-92	<input checked="" type="checkbox"/> S-614-3	<input type="checkbox"/>	CLASS II SIGNS	139
<input type="checkbox"/> M-203-12	<input type="checkbox"/>	SUPERELEVATION STREETS (2 SHEETS)	9-10	<input type="checkbox"/> M-607-10	<input type="checkbox"/>	PICKET SNOW FENCE	93	<input checked="" type="checkbox"/> S-614-4	<input type="checkbox"/>	CLASS III SIGNS (3 SHEETS)	140-142
<input checked="" type="checkbox"/> M-206-1	<input type="checkbox"/>	EXCAVATION AND BACKFILL FOR STRUCTURES (2 SHEETS)	11-12	<input type="checkbox"/> M-607-15	<input type="checkbox"/>	ROAD CLOSURE GATE (9 SHEETS)	94-102	<input checked="" type="checkbox"/> S-614-5	<input type="checkbox"/>	BREAK-AWAY SIGN SUPPORT DETAILS FOR GROUND SIGNS (2 SHEETS)	143-144
<input type="checkbox"/> M-206-2	<input type="checkbox"/>	EXCAVATION AND BACKFILL FOR BRIDGES (2 SHEETS)	13-14	<input type="checkbox"/> M-608-1	<input type="checkbox"/>	CURB RAMPS (4 SHEETS)	103-106	<input checked="" type="checkbox"/> S-614-6	<input type="checkbox"/>	CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS (2 SHEETS)	145-146
<input checked="" type="checkbox"/> M-208-1	<input type="checkbox"/>	TEMPORARY EROSION CONTROL (7 SHEETS)	15-21	<input type="checkbox"/> M-609-1	<input type="checkbox"/>	CURBS, GUTTERS, AND SIDEWALKS (3 SHEETS)	107-109	<input checked="" type="checkbox"/> S-614-8	<input type="checkbox"/>	TUBULAR STEEL SIGN SUPPORT DETAILS (5 SHEETS)	147-151
<input type="checkbox"/> M-210-1	<input type="checkbox"/>	MAILBOX SUPPORTS (2 SHEETS)	22-23	<input type="checkbox"/> M-611-1	<input type="checkbox"/>	CATTLE GUARD (2 SHEETS)	110-111	<input checked="" type="checkbox"/> S-614-10	<input type="checkbox"/>	MARKER ASSEMBLY INSTALLATIONS	152
<input type="checkbox"/> M-214-1	<input type="checkbox"/>	PLANTING DETAILS	24	<input checked="" type="checkbox"/> M-613-1	<input type="checkbox"/>	ROADWAY LIGHTING (4 SHEETS)	112-115	<input type="checkbox"/> S-614-12	<input type="checkbox"/>	STRUCTURE NUMBER INSTALLATION	153
<input type="checkbox"/> M-412-1	<input type="checkbox"/>	CONCRETE PAVEMENT JOINTS (5 SHEETS)	25-29	<input type="checkbox"/> M-614-1	<input type="checkbox"/>	RUMBLE STRIPS (3 SHEETS)	116-118	<input type="checkbox"/> S-614-14	<input type="checkbox"/>	FLASHING BEACON AND SIGN INSTALLATIONS (3 SHEETS)	154-156
<input type="checkbox"/> M-510-1	<input type="checkbox"/>	STRUCTURAL PLATE PIPE H-20 LOADING	30	<input type="checkbox"/> M-614-2	<input type="checkbox"/>	SAND BARREL ARRAYS (2 SHEETS)	119-120	<input checked="" type="checkbox"/> S-614-14	<input type="checkbox"/>	FLASHING BEACON AND SIGN INSTALLATIONS (3 SHEETS)	154-156
<input type="checkbox"/> M-601-1	<input type="checkbox"/>	SINGLE CONCRETE BOX CULVERT (2 SHEETS)	31-32	<input type="checkbox"/> M-615-1	<input type="checkbox"/>	EMBANKMENT PROTECTOR TYPE 3	121	<input checked="" type="checkbox"/> S-614-20	<input type="checkbox"/>	TYPICAL POLE MOUNT SIGN INSTALLATIONS	157
<input type="checkbox"/> M-601-2	<input type="checkbox"/>	DOUBLE CONCRETE BOX CULVERT (2 SHEETS)	33-34	<input type="checkbox"/> M-615-2	<input type="checkbox"/>	EMBANKMENT PROTECTOR TYPE 5	122	<input type="checkbox"/> S-614-21	<input type="checkbox"/>	CONCRETE BARRIER SIGN POST INSTALLATIONS	158
<input type="checkbox"/> M-601-3	<input type="checkbox"/>	TRIPLE CONCRETE BOX CULVERT (2 SHEETS)	35-36	<input type="checkbox"/> M-616-1	<input type="checkbox"/>	INVERTED SIPHON	123	<input checked="" type="checkbox"/> S-614-22	<input type="checkbox"/>	TYPICAL MULTI-SIGN INSTALLATIONS	159
<input type="checkbox"/> M-601-10	<input type="checkbox"/>	HEADWALL FOR PIPES	37	<input type="checkbox"/> M-620-1	<input type="checkbox"/>	FIELD LABORATORY CLASS 1	124	<input type="checkbox"/> S-614-40	<input type="checkbox"/>	TYPICAL TRAFFIC SIGNAL INSTALLATION DETAILS (7 SHEETS)	160-166
<input type="checkbox"/> M-601-11	<input type="checkbox"/>	TYPE "S" SADDLE HEADWALLS FOR PIPE	38	<input type="checkbox"/> M-620-2	<input type="checkbox"/>	FIELD LABORATORY CLASS 2	125	<input type="checkbox"/> S-614-40A	<input type="checkbox"/>	ALTERNATIVE TRAFFIC SIGNAL INSTALLATION DETAILS (5 SHEETS)	167-171
<input type="checkbox"/> M-601-12	<input type="checkbox"/>	HEADWALLS AND PIPE OUTLET PAVING	39	<input type="checkbox"/> M-620-11	<input type="checkbox"/>	FIELD OFFICE CLASS 1	126	<input type="checkbox"/> S-614-50	<input type="checkbox"/>	MONOTUBE OVERHEAD SIGNS (14 SHEETS)	172-185
<input type="checkbox"/> M-601-20	<input type="checkbox"/>	WINGWALLS FOR PIPE OR BOX CULVERTS	40	<input type="checkbox"/> M-620-12	<input type="checkbox"/>	FIELD OFFICE CLASS 2	127	<input checked="" type="checkbox"/> S-627-1	<input type="checkbox"/>	PAVEMENT MARKINGS (5 SHEETS)	186-190
<input type="checkbox"/> M-603-1	<input type="checkbox"/>	METAL AND PLASTIC PIPE (2 SHEETS)	41-42	<input type="checkbox"/> M-629-1	<input type="checkbox"/>	SURVEY MONUMENTS (2 SHEETS)	128-129	<input checked="" type="checkbox"/> S-630-1	<input type="checkbox"/>	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (12 SHEETS)	191-202
<input type="checkbox"/> M-603-2	<input type="checkbox"/>	REINFORCED CONCRETE PIPE	43					<input checked="" type="checkbox"/> S-630-2	<input type="checkbox"/>	BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) AND VERTICAL PANELS	203
<input type="checkbox"/> M-603-3	<input type="checkbox"/>	PRECAST CONCRETE BOX CULVERT	44					<input checked="" type="checkbox"/> S-630-3	<input type="checkbox"/>	FLASHING BEACON (PORTABLE) DETAILS	204
<input type="checkbox"/> M-603-10	<input type="checkbox"/>	CONCRETE AND METAL END SECTIONS (2 SHEETS)	45-46								
<input type="checkbox"/> M-604-10	<input type="checkbox"/>	INLET, TYPE C	47								
<input type="checkbox"/> M-604-11	<input type="checkbox"/>	INLET, TYPE D	48								
<input type="checkbox"/> M-604-12	<input type="checkbox"/>	CURB INLET TYPE R (2 SHEETS)	49-50								
<input type="checkbox"/> M-604-13	<input type="checkbox"/>	CONCRETE INLET TYPE 13	51								
<input type="checkbox"/> M-604-20	<input type="checkbox"/>	MANHOLES (3 SHEETS)	52-54								
<input type="checkbox"/> M-604-25	<input type="checkbox"/>	VANE GRATE INLET (5 SHEETS)	55-59								
<input type="checkbox"/> M-605-1	<input type="checkbox"/>	SUBSURFACE DRAINS	60								
<input type="checkbox"/> M-606-1	<input type="checkbox"/>	GUARDRAIL TYPE 3 W-BEAM (16 SHEETS)	61-76								
<input type="checkbox"/> M-606-13	<input type="checkbox"/>	GUARDRAIL TYPE 7 F-SHAPE BARRIER (4 SHEETS)	77-80								
<input type="checkbox"/> M-606-14	<input type="checkbox"/>	PRECAST TYPE 7 CONCRETE BARRIER (3 SHEETS)	81-83								

THE STANDARD PLAN SHEETS INDICATED HEREON BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

COLORADO
 DEPARTMENT OF TRANSPORTATION
 STANDARD PLANS LIST
 M&S STANDARDS
 July 04, 2006

Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed			Project No./Code IM 070A-003	
Creation Date: 02/18/08	Initials: SRB	<input type="checkbox"/>	<input type="checkbox"/>			STANDARD PLANS LIST				16701
Last Modification Date: 02/18/08	Initials: SRB	<input type="checkbox"/>	<input type="checkbox"/>			No. Revisions:				
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Drawing File Name: gespn01.dgn		<input type="checkbox"/>	<input type="checkbox"/>	Void:	Detailer: SRB	Sheet Subset: Standard				
Scale:	Units: ENGLISH	<input type="checkbox"/>	<input type="checkbox"/>	REGION I DW		Subset Sheets:				



TRENCHING

NOTE:

1. THIS WORK SHALL BE PAID AS: ITEM 613, () INCH ELECTRICAL CONDUIT (PLASTIC), LATERALS LESS THAN 100' LONG ASSUMED TO BE STICK-TYPE CONDUIT (PVC SCHEDULE 80), AND LATERALS GREATER THAN 100' LONG ASSUMED TO BE REEL TYPE CONDUIT (HDPE SDR 13.5).

DIRECTIONAL BORE

NOTE:

1. DIRECTIONAL BORES SHALL BE PAID AS ITEM 613, 3" ELECTRICAL CONDUIT BORED. LINEAR FOOT PRICE SHALL BE FULL PAYMENT FOR ALL CONDUITS IN BUNDLE AS DESIGNATED ON PLANS.

Computer File Information		Index of Revisions			As Constructed		TYPICAL SECTIONS		Project No./Code	
Creation Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				No. Revisions:			IM 070A-003	
Last Modification Date: 02/22/08	Initials: SRB	<input type="checkbox"/>				Revised:	Designer: SRB	Structure	16701	
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Drawing File Name:	borings.dgn	<input type="checkbox"/>					Sheet Subset:	Subset Sheets:	Sheet Number: 3	
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REGION I DW

GENERAL NOTES



1. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF RIGHT OF WAY. CONTRACTOR SHALL INDEMNIFY AND HOLD CDOT SAFE AND HARMLESS FROM ANY CLAIMS OR DAMAGES ARISING FROM THE CONTRACTOR'S USE OF PROPERTY OUTSIDE THE LIMITS OF RIGHT-OF-WAY.
2. DEPTH OF MOISTURE AND DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
 FULL DEPTH OF EMBANKMENTS
 MINIMUM R VALUE OF 70 REQUIRED IN TOP TWO FEET
 BASES OF CUTS AND FILLS ~ 0.5 FT DEPTH
 EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS SHALL BE CONSIDERED AS INCIDENTAL TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.
3. TYPE OF COMPACTION FOR THIS PROJECT WILL BE AASHTO T-180.
4. FULL COMPLIANCE PAVEMENT MARKINGS AND ROADSIDE DELINEATION SHALL BE IN PLACE AT THE END OF EACH WORKING DAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. IF ANY SOIL CONTAMINATION IS SUSPECTED WHILE EXCAVATING, IMMEDIATELY CONTACT THE ENGINEER.
6. THE CONTRACTOR SHALL NOT STOCKPILE ANY MATERIAL WITHIN CDOT ROW UNLESS APPROVED BY THE ENGINEER.
7. THE CONTRACTOR SHALL SUBMIT A PLAN ADDRESSING LOCAL DRAINAGE DURING EACH PHASE OF CONSTRUCTION TO THE ENGINEER FOR REVIEW. THIS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
8. CONTROL OF SURFACE RUNOFF AND REPAIR OF DAMAGES RESULTING FROM RUNOFF IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE COST OF THE WORK.
9. ALL REMOVED MATERIALS WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
10. ALL SHOULDERS AND OTHER PAVED AREAS SHALL BE SWEEPED ON A DAILY BASIS TO REMOVE ANY FOREIGN DEBRIS FROM THE SHOULDER AND TRAVELED WAY. ALL SWEEPING OPERATIONS SHALL BE DONE BY A PICK-UP TYPE BROOM AND SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
11. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DAMAGE THERETO.
12. NO UTILITY RESEARCH WAS PERFORMED IN THE DESIGN OF THIS PROJECT. THE UTILITY INFORMATION SHOWN ON THE PLANS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND AVOIDING THEM. REFER TO PARAGRAPH 105.10 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL CALL 1-800-922-1987 FOR UTILITY LOCATIONS AT LEAST TWO WORKING DAYS PRIOR TO ANY DIGGING, NOT INCLUDING THE DAY OF NOTIFICATION. CONDUIT RUNNING LINE ALIGNMENT MAYBE MOVED TO AVOID EXISTING UTILITIES WITH THE APPROVAL OF THE ENGINEER. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY UTILITY CONFLICT WHICH CANNOT BE READILY RESOLVED AND WHICH MAY REQUIRE REDESIGN OF ANY PART OF THE PROJECT.
13. IT IS ESTIMATED THAT 48 HOURS OF POTHOLES WILL BE REQUIRED FOR THE PROJECT, AND WILL BE PAID UNDER ITEM 203, POTHOLES. THE CONTRACTOR SHALL SUBMIT A POTHOLES PLAN TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE FOR APPROVAL WHICH DESCRIBES A PLAN FOR POTHOLES ALL EXISTING FACILITIES WHICH MAY BE IMPACTED BY CONSTRUCTION.
14. IT SHOULD BE ASSUMED THAT THE CONTRACTOR WILL ENCOUNTER BOULDERS AND ROCKS DURING ALL EXCAVATIONS INCLUDING LIGHT FOUNDATIONS, SITE GRADING, CONDUIT TRENCHING, CONDUIT BORING, AND SIGN FOOTINGS. THE CONTRACTOR WILL BE REQUIRED TO EITHER AVOID OR REMOVE BOULDERS AND ROCKS WHEN ENCOUNTERED. THE COST OF THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
15. DUST PALLIATIVE AND WATER SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
16. IT IS ESTIMATED THAT 20 DELINEATORS WILL BE RESET AS DIRECTED BY THE ENGINEER.
17. IT IS ESTIMATED THAT 400 LINEAR FEET OF FENCE (PLASTIC) (ITEM 607) WILL BE REQUIRED FOR THE PROJECT TO PROTECT MISCELLANEOUS ITEMS DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. FENCE SHALL BE RESET AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT SHALL BE MADE TO RESET FENCE.
18. TWO SANITARY FACILITY SHALL BE PROVIDED FOR THE ENGINEER'S USE AND SHALL BE TRAILER MOUNTED FOR EASY MOBILITY AROUND JOBSITE. THE CONTRACTOR SHALL MOVE THE FACILITY AROUND THE JOB SITE AS DIRECTED BY THE ENGINEER.
19. IT IS ESTIMATED THAT 1 LUMP SUM FOR MOBILIZATION (ITEM 626) WILL BE REQUIRED FOR THE PROJECT. IT IS ANTICIPATED THAT MORE THAN ONE MOBILIZATION WILL BE REQUIRED FOR MULTIPLE ACTIVITIES.
20. NO FUELS, LUBRICANTS OR OTHER HAZARDOUS MATERIALS WILL BE STORED ALONG THE CORRIDOR.
21. WHEREVER FOUND IN THESE PLANS OR ACCOMPANYING PROJECT SPECIAL PROVISIONS, THE TERM EUMT IS DEFINED AS "EISENHOWER-JOHNSON MEMORIAL TUNNELS."
22. THE CONTRACTOR SHALL KEEP ONE SET OF PLANS, REVIEWED SHOP DRAWINGS AND WORKING DRAWINGS AVAILABLE ON THE PROJECT SITE AT ALL TIMES. THIS SET SHALL BE DEFINED AS THE "CONSTRUCTION DRAWINGS." THE CONTRACTOR SHALL NOTE ON THESE CONSTRUCTION DRAWINGS ALL CHANGES AND DEVIATIONS FROM THE WORK SHOWN ON THE PLANS, SHOP DRAWINGS AND WORKING DRAWINGS. THE CONSTRUCTION DRAWINGS SHALL BE KEPT CURRENT AS THE WORK PROGRESSES AND NOTATION SHALL BE MADE WITHIN SEVEN DAYS OF THE CHANGE OR DEVIATION. THE FIRST SHEET OR PAGE OF EACH SET OF CONSTRUCTION DRAWINGS SHALL BE STAMPED "AS CONSTRUCTED" AND SIGNED BY THE CONTRACTOR. UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT, THE CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER.
23. AERIAL TOPOGRAPHIC MAPPING APPROXIMATELY 15 YEARS OLD WAS USED TO DESIGN THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTING CONDITIONS AT EACH SITE.
24. IT IS ESTIMATED THAT 40 HRS OF BLADING WILL BE REQUIRED ON PROJECT AS DIRECTED BY THE ENGINEER.
25. IT IS ESTIMATED THAT 2 GROUND SIGNS WILL BE RESET AS DIRECTED BY THE ENGINEER.

CALL UTILITY NOTIFICATION CENTER OF COLORADO 1-800-922-1987	CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES
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Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		GENERAL NOTES		Project No./Code	
Creation Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				No. Revisions:				IM 070A-003	
Last Modification Date: 02/22/08	Initials: SRB	<input type="checkbox"/>		REGION I	DW	Revised:	Designer: SRB	Structure	16701		
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Drawing File Name: geno1.dgn		<input type="checkbox"/>				Void:	Sheet Subset: General	Subset Sheets:	Sheet Number: 4		
Scale: Units: ENGLISH		<input type="checkbox"/>									



SUMMARY OF APPROXIMATE QUANTITIES

INDEX			CONTRACT	CONTRACT ITEM	UNIT	TRAFFIC				TOTALS			
BOOK	PAGE	SHEET	ITEM NO.			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
			202-00810	REMOVAL OF GROUND SIGN	EACH	2						2	
			202-00821	REMOVAL OF SIGN PANEL	EACH	6						6	
			203-01500	BLADING	HOURL	40						40	
			203-01597	POTHOLING	HOURL	48						48	
			208-00002	EROSION LOG (12 INCH)	LF	3320						3320	
			210-00090	RESET DELINEATOR	EACH	20						20	
			210-00810	RESET GROUND SIGN	EACH	2						2	
			212-00006	SEEDING (NATIVE)	ACRE	1						1	
			213-00002	MULCHING (WEED FREE HAY)	ACRE	1						1	
			213-00061	MULCH TACKIFIER	LB	200						200	
			607-11525	FENCE (PLASTIC)	LF	500						500	
			612-00260	LOCATION MARKER (FIBER OPTIC) (DDME)	EACH	36						36	
			612-00270	LOCATION MARKER (UTILITY) (FLAT SLAT)	EACH	36						36	
			613-00306	3 INCH ELECTRICAL CONDUIT (BORED)	LF	500						500	
			613-01125	1-1/4 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	9845						9845	
			613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	1900						1900	
			613-01250	2-1/2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	2510						2510	
			613-01300	3 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	2700						2700	
			613-04250	2-1/2 INCH ELECTRICAL CONDUIT (LIQUIDTIGHT FLEXIBLE METAL)	LF	50						50	
			613-07034	PULL BOX (24X36X18)	EACH	21						21	
			613-10010	WIRING (SPECIAL)	LS	1						1	
			613-34350	LIGHT STANDARD METAL (35 FOOT)	EACH	11						11	
			613-34351	LIGHT STANDARD METAL (35 FOOT) (SPECIAL) (1 ARM)	EACH	235						235	
			613-40012	LIGHT STANDARD FOUNDATION SPECIAL	EACH	235						235	
			613-50100	LIGHTING CONTROL CENTER	EACH	16						16	
			613-70400	LUMINAIRE HIGH PRESSURE SODIUM (400 WATT)	EACH	5						5	
			613-75150	LUMINAIRE METAL HALIDE (150 WATT)	EACH	481						481	
			614-00012	SIGN PANEL (CLASS II)	SF	358						358	
			614-00612	STEEL SIGN POST (W 6X12)	LF	57						57	
			614-00821	STEEL SIGN POST (W 8X21)	LF	65						65	
			614-01585	STEEL SIGN SUPPORT (2-1/2 INCH ROUND SCH 80) (POST)	LF	294						294	
			614-01588	STEEL SIGN SUPPORT (2-1/2 INCH ROUND SCH 80) (SLIPBASE)	EACH	24						24	
			614-03001	CONCRETE FOOTING (TYPE 1)	EACH	4						4	

Computer File Information		Index of Revisions		 Region 1 16500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		SUMMARY OF APPROXIMATE QUANTITIES		Project No./Code	
Creation Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				No. Revisions:				IM 070A-003	
Last Modification Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				Revised:		Designer: SRB	Structure	16701	
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Scale:	Units: ENGLISH	<input type="checkbox"/>		REGION I	DW						



SUMMARY OF APPROXIMATE QUANTITIES

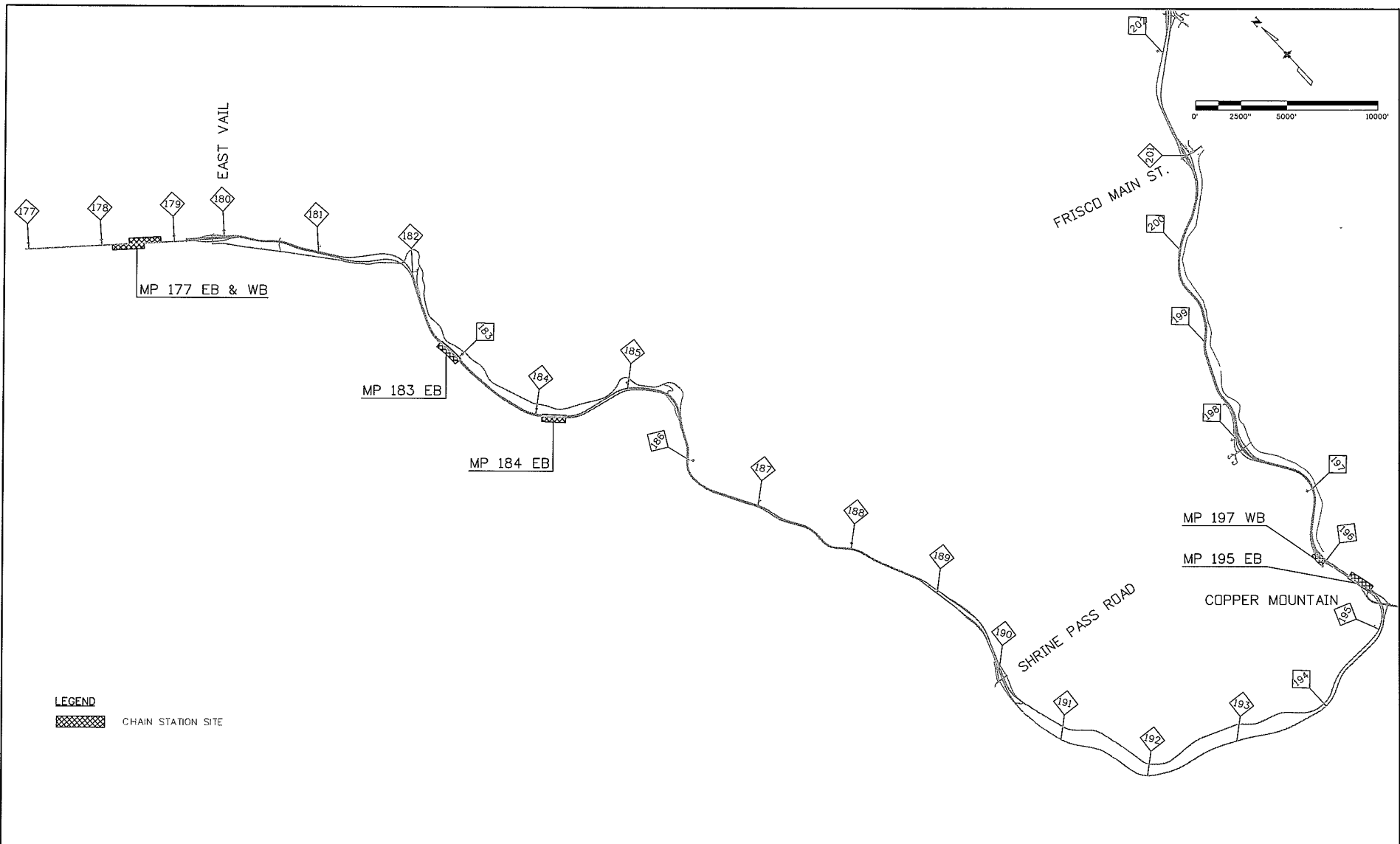
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BOOK	PAGE	SHEET				PLAN	AS CONST.	PLAN	AS CONST.					PLAN	AS CONST.	
			614-01585	STEEL SIGN SUPPORT (2-1/2 INCH ROUND SCH 80) (POST)	LF	294									294	
			614-01588	STEEL SIGN SUPPORT (2-1/2 INCH ROUND SCH 80) (SLIPBASE)	EACH	24									24	
			614-03001	CONCRETE FOOTING (TYPE 1)	EACH	4									4	
			614-03004	CONCRETE FOOTING (TYPE 4)	EACH	5									5	
			614-10128	BLANKOUT SIGN (FIBER OPTIC)	EACH	5									5	
			614-72830	COMMUNICATIONS CABINET	EACH	7									7	
			614-80000	FLASHING BEACON	EACH	4									4	
			614-86105	TELEMETRY (FIELD)	EACH	2									2	
			614-87010	FIBER OPTIC CABLE (SINGLE MODE) (12 FIBER)	LF	1000									1000	
			620-00020	SANITARY FACILITY	EACH	2									2	
			626-00000	MOBILIZATION	LS	1									1	
			630-00000	FLAGGING	HOUR	756									756	
			630-00007	TRAFFIC CONTROL INSPECTION	DAY	42									42	
			630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	105									105	
			630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EACH	6									6	
			630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EACH	33									33	
			630-80343	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE C)	EACH	26									26	
			630-80344	CONSTRUCTION TRAFFIC SIGN (SPECIAL)	SF	94									94	
			630-80355	PORTABLE MESSAGE SIGN PANEL	EACH	1									1	
			630-80358	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (C TYPE)	EACH	1									1	
			630-80360	DRUM CHANNELIZING DEVICE	EACH	50									50	
			630-80380	TRAFFIC CONE	EACH	400									400	
			630-85040	IMPACT ATTENUATOR (TRUCK MOUNTED ATTENUATOR) (TEMPORARY)	EACH	1									1	
			700-70010	F/A MINOR CONTRACT REVISIONS	FA	0									0	
			700-70011	F/A PARTNERING	FA	0									0	
			700-70023	F/A ON-THE-JOB TRAINEE	FA	1									1	
			700-70028	F/A ESB PROGRAM	FA	1									1	
			700-70380	F/A EROSION CONTROL	FA	1									1	



Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343 REGION I DW	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		SUMMARY OF APPROXIMATE QUANTITIES			Project No./Code	
Creation Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				No. Revisions:				IM 070A-003		
Last Modification Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				Revised:	Designer: SRB	Structure			16701	
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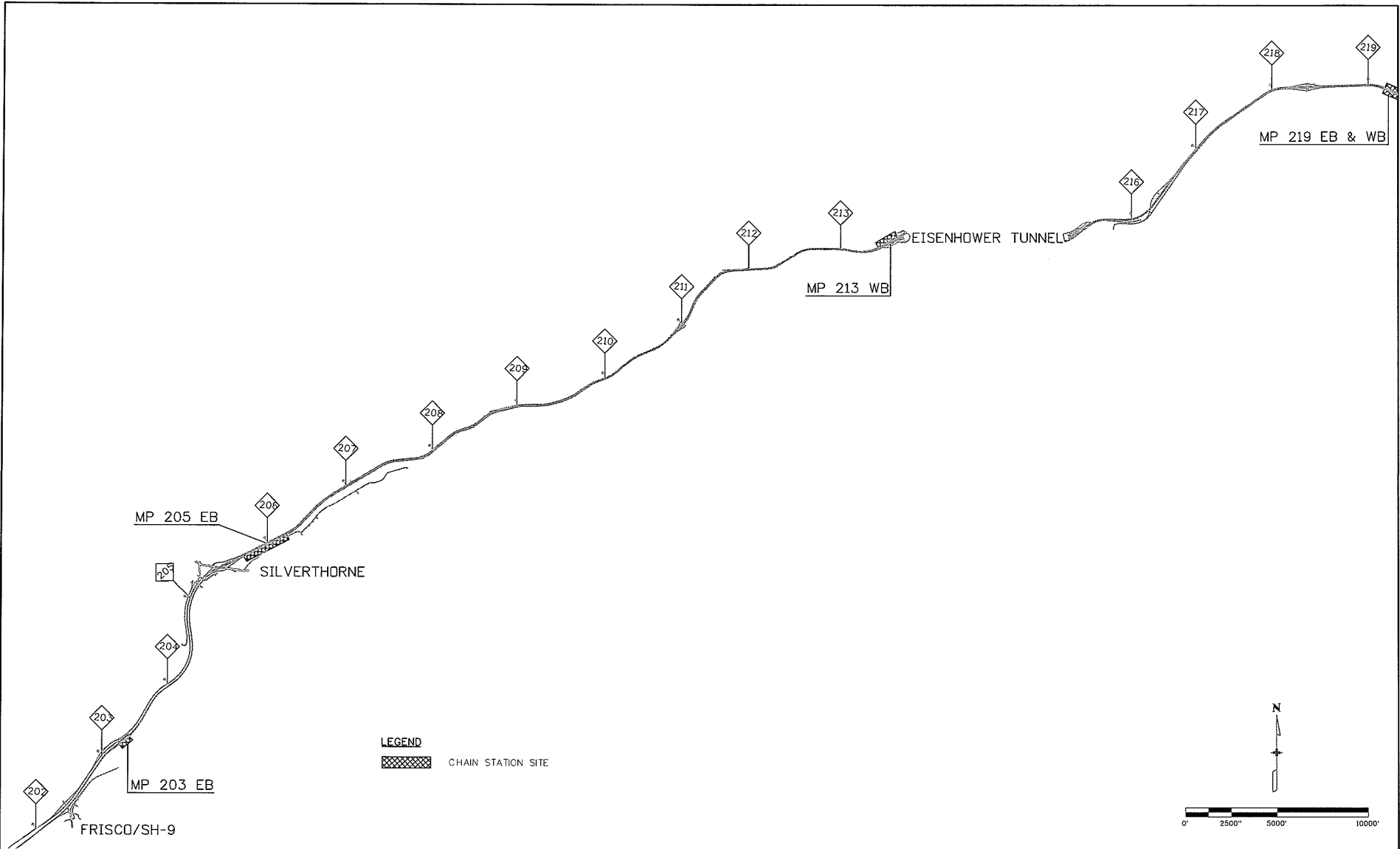
TABULATION OF CONUDIT, PULL BOXES, CABINETS AND MARKERS



LOCATION	PULLBOX (24x36)	FIBER OPTIC CABLE (SINGLE MODE)		LOCATION MARKER (FIBER OPTIC) (DOME)			LOCATION MARKER (UTILITY) (FLAT SLAT)	1 INCH ELECTRICAL CONDUIT (BORED)	1-1/4 INCH ELECTRICAL CONDUIT		2-1/2 INCH ELECTRICAL CONDUIT (PLASTIC)		2 INCH ELECTRICAL CONDUIT (PLASTIC)		3 INCH ELECTRICAL CONDUIT (PLASTIC)		2-1/2 INCH ELECTRICAL CONDUIT (LIQUID TIGHT, FLEXIBLE, METAL)	Communications Cabinet	
		6 STRANDS	144 STRANDS	RUNNING LINE LOCATION MARKER	PULL BOX AND MANHOLE LOCATION MARKER	TOTAL			STICK-TYPE (PVC SCHEDULE 80)	REEL TYPE (HDPE SOR 13.5)	STICK-TYPE (PVC SCHEDULE 80)	REEL TYPE (HDPE SOR 13.5)	STICK-TYPE (PVC SCHEDULE 80)	REEL TYPE (HDPE SOR 13.5)	STICK-TYPE (PVC SCHEDULE 80)	REEL TYPE (HDPE SOR 13.5)			
		EA	LF	LF	EACH	EACH			EACH	EACH	LF	LF	LF	LF	LF	LF			LF
MP 177 EB - STA 10+00 TO 36+50	5	120			4		4												1
MP 183 EB - STA 10+00 TO 24+00	2	60			2		2		10			1700					175		1
MP 184 EB - STA 10+00 TO 23+00	3	60			2		2	150											1
MP 195 EB - STA 10+00 TO 24+00	3	120			4		4												
SHEET 1								200				165							
SHEET 2											870	10					2525		
MP 196 WB - STA 10+00 TO 17+50	1	60			2		2				1000		100						1
MP 203 EB - STA 10+00 TO 17+00		60			2		2												
SHEET 1																			
SHEET 2																			
MP 205 EB - STA 10+00 TO 38+00	1	60			2		2												
MP 219 EB & WB - STA 10+00 TO 27+00, STA 10+00 TO 29+00		120			4		4										150		1
MP 221 WB - STA 10+00 TO 19+00	1	60			2		2		50							1170			1
MP 223 WB - STA 10+00 TO 22+00	1	60			2		2												1
SHEET 1		60																	
SHEET 2																	30		
MP 228 EB & WB - STA 10+00 TO 38+00, STA 10+00 TO 44+00		120			4		4												
SHEET 1											1500		700				100		
SHEET 2											500								
MP 241 EB - STA 10+00 TO 23+00	2	60			2		2	150			2200					450			
MP 251 EB - STA 10+00 TO 19+00	2	60			2		2												
SHEET 1		60																	
SHEET 2																			
MP 254 EB - STA 10+00 TO 23+50		60			2		2												
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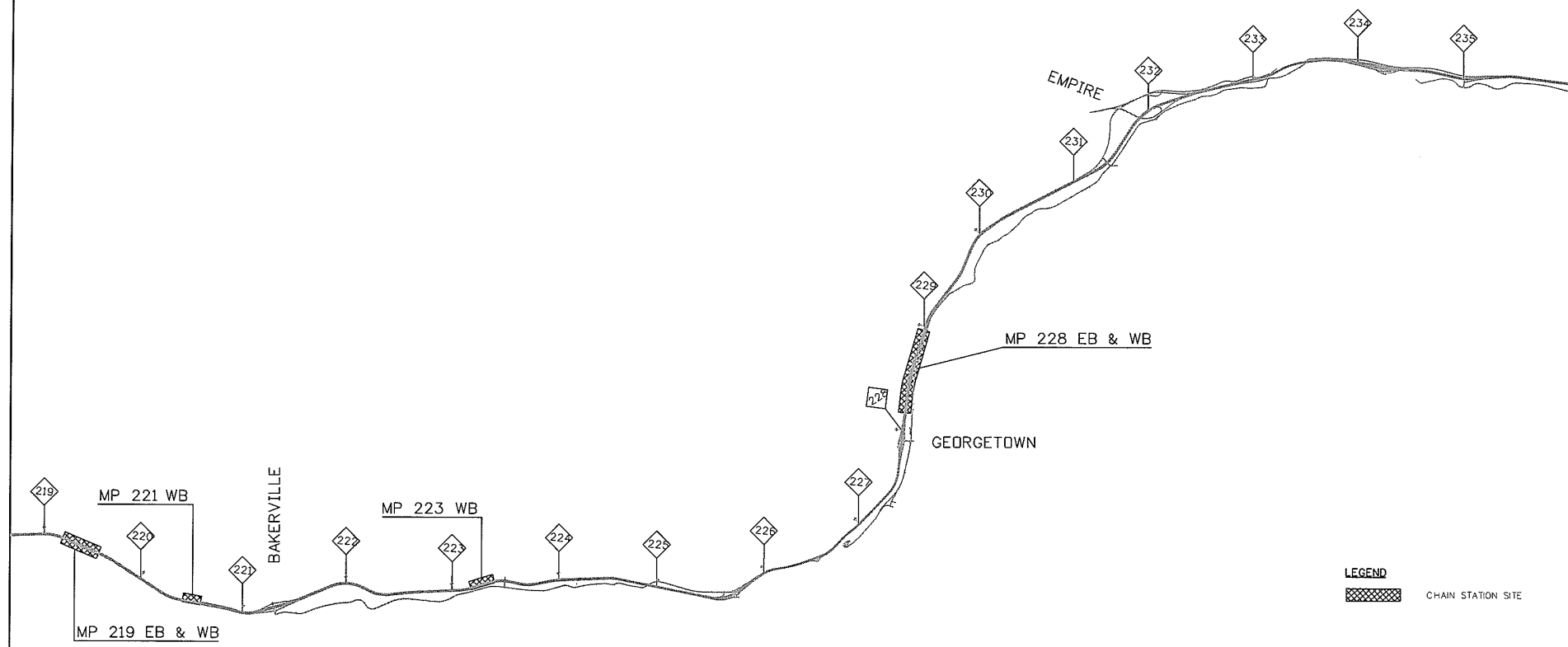
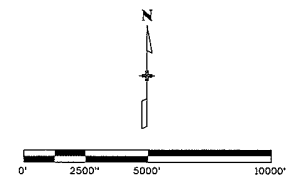
Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		TABULATIONS		Project No./Code	
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Last Modification Date: 02/25/08	Initials: SRB	<input type="checkbox"/>		Revised:	Designer: SRB	Structure:		16701			
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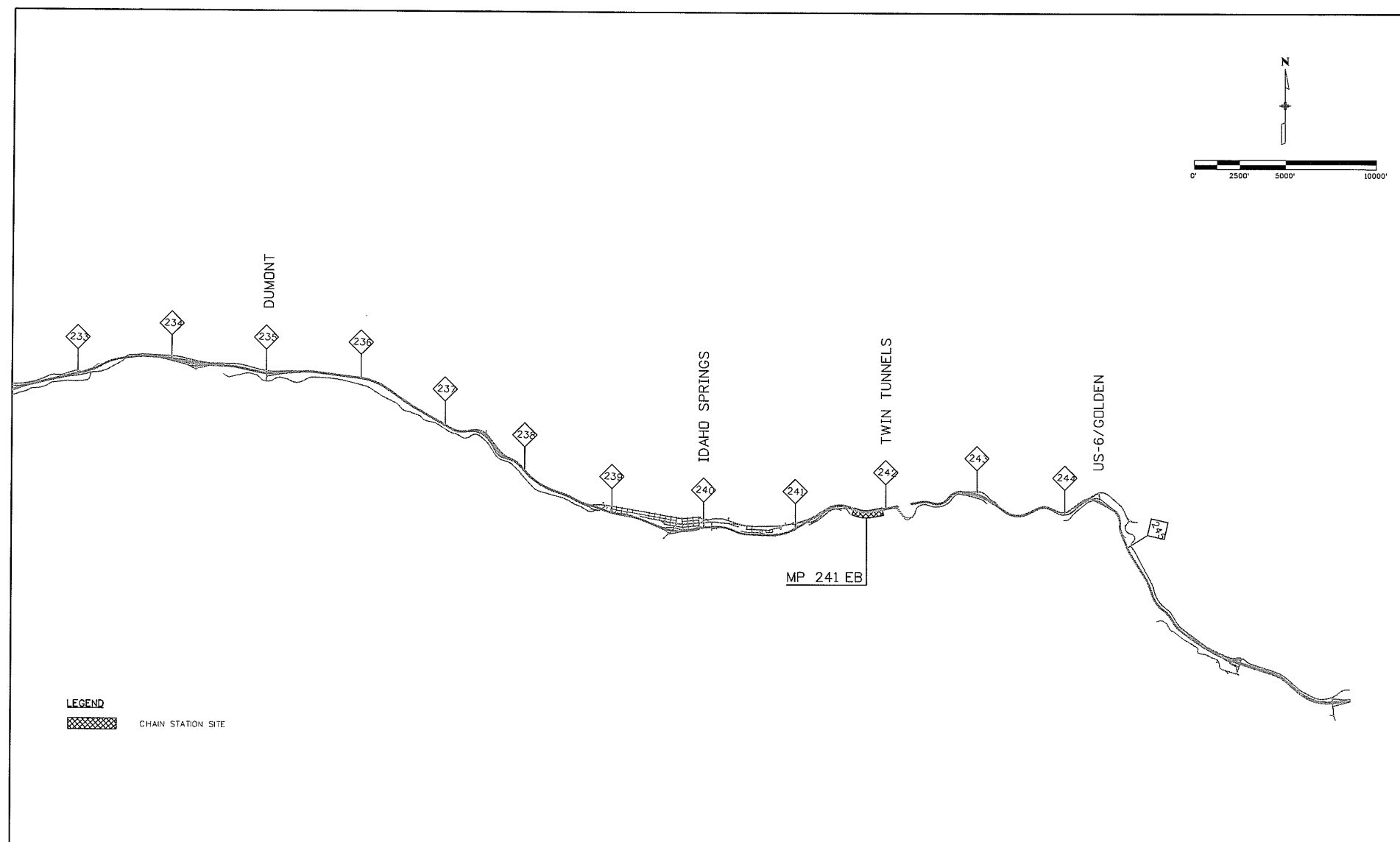
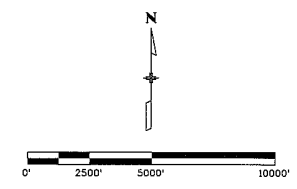
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Last Modification Date: 02/18/08	Initials: SRB	<input type="checkbox"/>				Revised:	Designer: SRB	Structure:			16701	
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Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		STATION LOCATION PLAN		Project No./Code
Creation Date: 02/18/08	Initials: SRB					No. Revisions:			IM 070A-003	
Last Modification Date: 02/23/08	Initials: SRB					Revised:	Designer: SRB	Structure Numbers:	16701	
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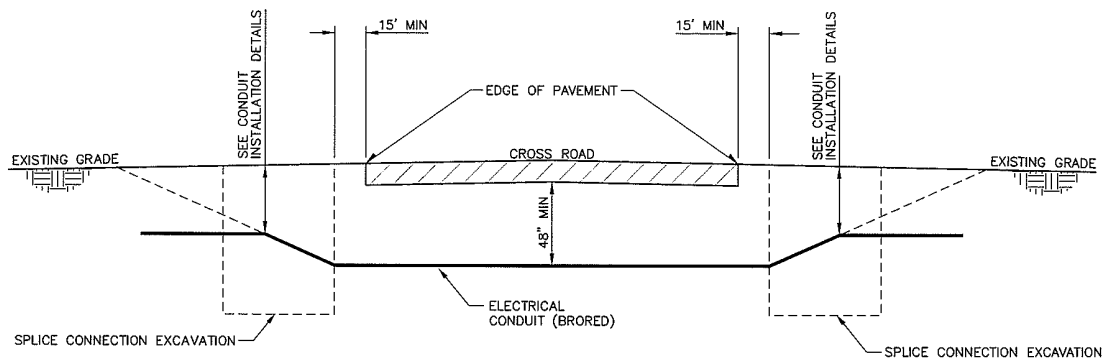


Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		STATION LOCATION PLAN		Project No./Code	
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LEGEND
 CHAIN STATION SITE



Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343 REGION I DW	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		STATION LOCATION PLAN		Project No./Code	
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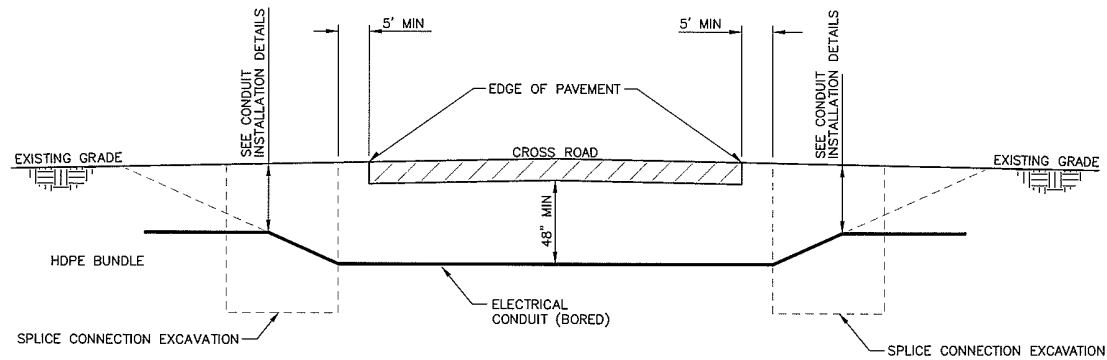


CROSS ROAD DIRECTIONAL BORE PROFILE
N.T.S

NOTES:

1. CONTRACTOR SHALL CONFORM TO THE APPLICABLE AGENCY REQUIREMENTS AND SPECIFICATION FOR BORE CROSSINGS
2. CLEARANCE BETWEEN EXISTING ROAD BASE AND TOP OF PROPOSED CASING SHALL BE A MINIMUM OF 48 INCHES OR AS SPECIFIED BY THE ENGINEER.
3. MINIMUM DEPTH OF 48 INCHES MUST BE ACHIEVED AT LEAST 15 FEET FROM EDGE OF PAVEMENT AS NO EXCAVATION IS ALLOWED WITHIN 15 FEET.
4. EXCAVATIONS REQUIRE SEEDING AND MULCHING.
5. CONDUIT SPLICE CONNECTION EXCAVATION AND CONDUIT SPLICE SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
6. CONTRACTOR SHALL BACKFILL AND REGRADE SITE TO MATCH EXISTING CONDITIONS.
7. CONTRACTOR MUST REPAIR ANY DAMAGE TO PAVEMENT CAUSED BY ERRANT BORING AT THEIR COST.



Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		BORING DETAILS		Project No./Code
Creation Date: 02/18/08	Initials: SRB					No. Revisions:		Designer: SRB	Structure Numbers	IM 070A-003
Last Modification Date: 02/18/08	Initials: SRB			Revised:		Detailer: SRB		16701		
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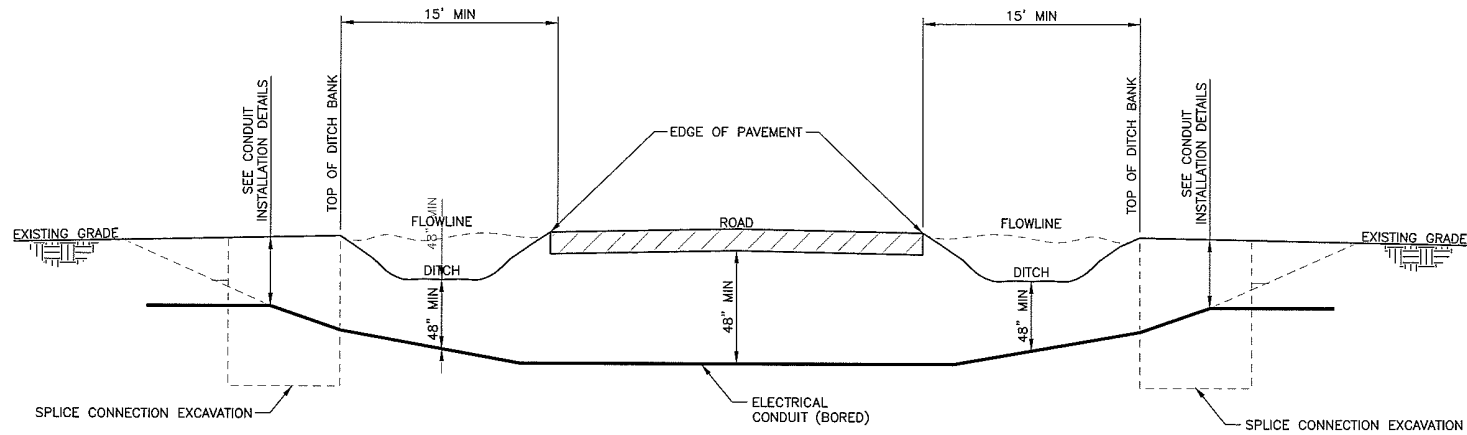


LOCAL ROAD/DIRECTIONAL BORE PROFILE
N.T.S.

NOTES:

1. CONTRACTOR SHALL CONFORM TO THE APPLICABLE AGENCY REQUIREMENTS AND SPECIFICATION FOR BORE CROSSINGS
2. CLEARANCE BETWEEN EXISTING ROAD BASE AND TOP OF PROPOSED CASING SHALL BE A MINIMUM OF 48 INCHES OR AS SPECIFIED BY THE ENGINEER.
3. MINIMUM DEPTH OF 48 INCHES MUST BE ACHIEVED AT LEAST 15 FEET FROM EDGE OF PAVEMENT AS NO EXCAVATION IS ALLOWED WITHIN 15 FEET.
4. EXCAVATIONS REQUIRE SEEDING AND MULCHING.
5. CONDUIT SPLICE CONNECTION EXCAVATION AND CONDUIT SPLICE SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
6. CONTRACTOR SHALL BACKFILL AND REGRADE SITE TO MATCH EXISTING CONDITIONS.
7. CONTRACTOR MUST REPAIR ANY DAMAGE TO PAVEMENT CAUSED BY ERRANT BORING AT THEIR COST.

Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed			BORING DETAILS			Project No./Code	
Creation Date: 02/18/08	Initials: SRB					No. Revisions:							
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Scale:	Units: ENGLISH			REGION I	DW								



ROAD AND DITCH DIRECTIONAL BORE PROFILE
N.T.S.

NOTES:

1. CONTRACTOR SHALL CONFORM TO THE APPLICABLE AGENCY REQUIREMENTS AND SPECIFICATION FOR BORE CROSSINGS
2. CLEARANCE BETWEEN EXISTING ROAD BASE AND TOP OF PROPOSED CASING SHALL BE A MINIMUM OF 48 INCHES OR AS SPECIFIED BY THE ENGINEER.
3. MINIMUM DEPTH OF 48 INCHES MUST BE ACHIEVED AT LEAST 15 FEET FROM EDGE OF PAVEMENT AS NO EXCAVATION IS ALLOWED WITHIN 15 FEET.
4. EXCAVATIONS REQUIRE SEEDING AND MULCHING.
5. CONDUIT SPLICE CONNECTION EXCAVATION AND CONDUIT SPLICE SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
6. CONTRACTOR SHALL BACKFILL AND REGRADE SITE TO MATCH EXISTING CONDITIONS.
7. CONTRACTOR MUST REPAIR ANY DAMAGE TO PAVEMENT CAUSED BY ERRANT BORING AT THEIR COST.

Computer File Information		Index of Revisions		As Constructed		BORING DETAILS		Project No./Code	
Creation Date: 02/18/08	Initials: SRB			No. Revisions:		Designer:	SRB	Structure	IM 070A-003
Last Modification Date: 02/18/08	Initials: SRB			Revised:		Detailer:	SRB	Numbers	16701
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REGION I DW

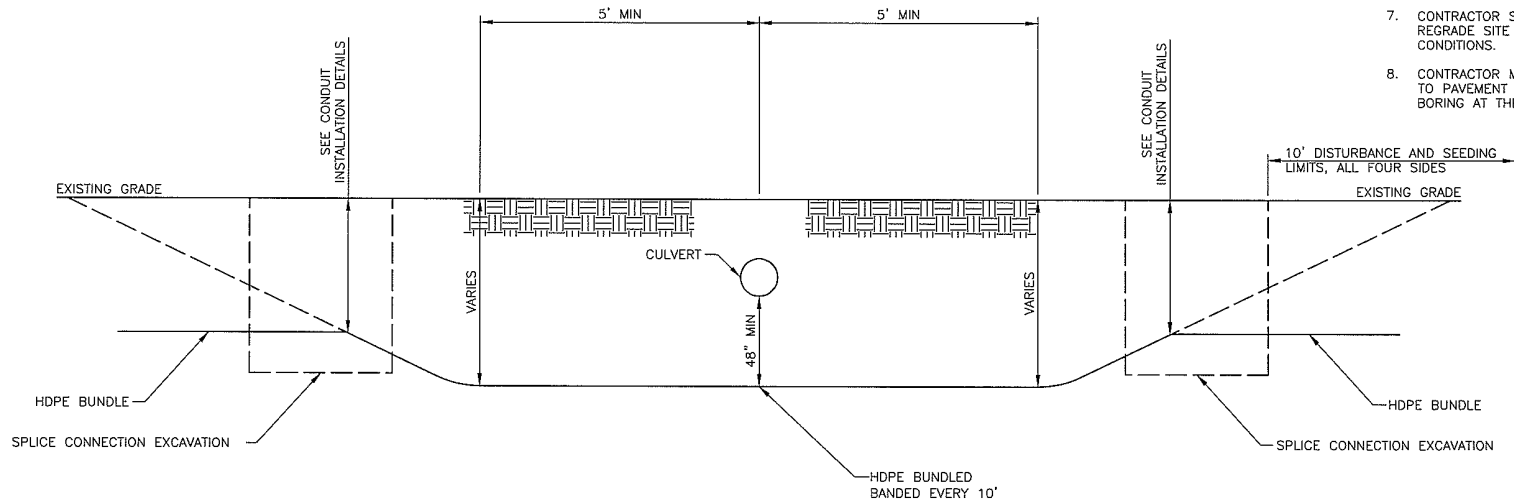




CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
UTILITY UTILITIES.

NOTES:

1. CONTRACTOR SHALL CONFORM TO THE APPLICABLE AGENCY REQUIREMENTS AND SPECIFICATION FOR BORE CROSSINGS.
2. CLEARANCE BETWEEN EXISTING ROAD BASE AND TOP OF PROPOSED CASING SHALL BE A MINIMUM OF 48 INCHES OR AS SPECIFIED BY THE ENGINEER.
3. MINIMUM DEPTH OF 48 INCHES MUST BE ACHIEVED AT LEAST 5 FEET FROM EDGE OF PAVEMENT.
4. EXCAVATIONS AND DISTURBANCE LIMITS REQUIRE SEEDING AND MULCHING.
5. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS ON HANDLING AND DISPOSING OF BORING SLUDGE.
6. CONDUIT SPLICE CONNECTION EXCAVATION AND CONDUIT SPLICE SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
7. CONTRACTOR SHALL BACKFILL AND REGRADE SITE TO MATCH EXISTING CONDITIONS.
8. CONTRACTOR MUST REPAIR ANY DAMAGE TO PAVEMENT CAUSED BY ERRANT BORING AT THEIR COST.



CULVERT DIRECTIONAL BORE PROFILE
N.T.S.

NOTE:

REFER TO CONDUIT INSTALLATION DETAILS FOR CASES WHERE TRENCH CROSSES OVER TOP OF CULVERT.

Computer File Information		Index of Revisions			As Constructed		BORING DETAILS			Project No./Code
Creation Date: 02/18/08	Initials: SRB				No. Revisions:					IM 070A-003
Last Modification Date: 02/22/08	Initials: SRB				Revised:	Designer: SRB	Structure Numbers			16701
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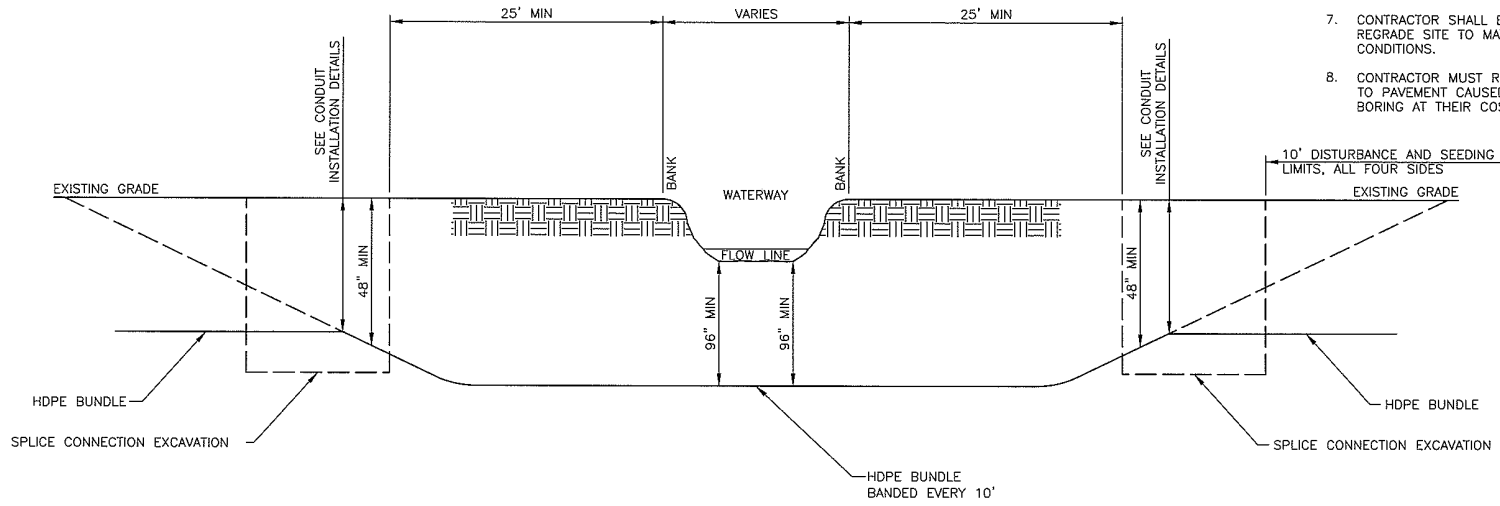
REGION I DW



CALL UTILITY NOTIFICATION
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1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

NOTES:

1. CONTRACTOR SHALL CONFORM TO THE APPLICABLE AGENCY REQUIREMENTS AND SPECIFICATION FOR BORE CROSSINGS.
2. CLEARANCE BETWEEN EXISTING BOTTOM OF WATERWAY AND TOP OF PROPOSED CASING SHALL BE A MINIMUM OF 96 INCHES OR AS SPECIFIED BY THE ENGINEER.
3. MINIMUM DEPTH OF 96 INCHES MUST BE ACHIEVED AT LEAST 25 FEET FROM EDGE OF WATERWAY AS NO EXCAVATION IS ALLOWED WITHIN 25 FEET OF THE BANKS.
4. EXCAVATIONS AND DISTURBANCE LIMITS REQUIRE SEEDING AND MULCHING.
5. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS ON HANDLING AND DISPOSING OF BORING SLUDGE.
6. CONDUIT SPLICE CONNECTION EXCAVATION AND CONDUIT SPLICE SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
7. CONTRACTOR SHALL BACKFILL AND REGRADE SITE TO MATCH EXISTING CONDITIONS.
8. CONTRACTOR MUST REPAIR ANY DAMAGE TO PAVEMENT CAUSED BY ERRANT BORING AT THEIR COST.



WATERWAY DIRECTIONAL BORE PROFILE

N.T.S.

NOTE:

SENSITIVE ENVIRONMENTAL AREA. NO PARKING, NO WORK AND NO STORING OF EQUIPMENT OR SUPPLIES IN THESE SENSITIVE ENVIRONMENTAL AREAS.

Computer File Information		Index of Revisions		As Constructed		BORING DETAILS		Project No./Code	
Creation Date: 02/18/08	Initials: SRB			No. Revisions:		Designer: SRB	Structure Numbers	IM 070A-003	
Last Modification Date: 02/22/08	Initials: SRB			Revised:		Detailer: SRB		16701	
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REGION I DW

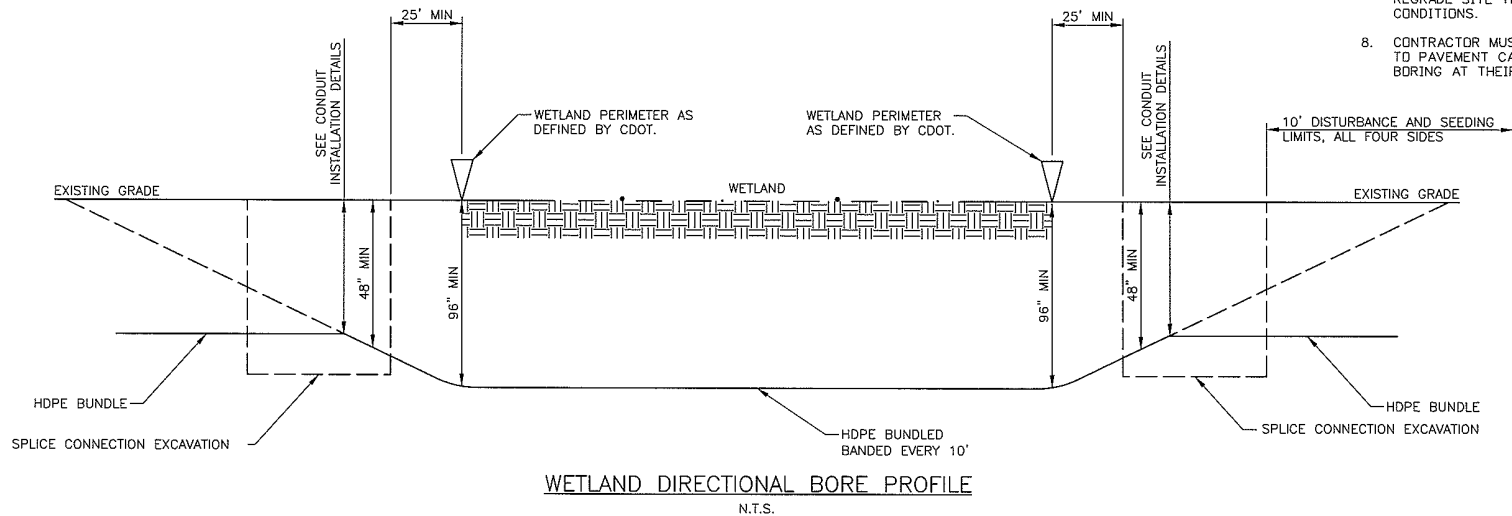


CALL UTILITY NOTIFICATION
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1-800-922-1987

CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

NOTES:

1. CONTRACTOR SHALL CONFORM TO THE APPLICABLE AGENCY REQUIREMENTS AND SPECIFICATION FOR BORE CROSSINGS.
2. CLEARANCE BETWEEN EXISTING GROUND AND TOP OF PROPOSED CASING SHALL BE A MINIMUM OF 96 INCHES OR AS SPECIFIED BY THE ENGINEER.
3. MINIMUM DEPTH OF 48 INCHES MUST BE ACHIEVED AT LEAST 25 FEET FROM EDGE OF WETLAND PERIMETER AS NO EXCAVATION IS ALLOWED WITHIN 25 FEET OF THE WETLAND PERIMETER.
4. EXCAVATIONS AND DISTURBANCE REQUIRE SEEDING AND MULCHING.
5. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS ON HANDLING AND DISPOSING OF BORING SLUDGE.
6. CONDUIT SPLICE CONNECTION EXCAVATION AND CONDUIT SPLICE SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
7. CONTRACTOR SHALL BACKFILL AND REGRADE SITE TO MATCH EXISTING CONDITIONS.
8. CONTRACTOR MUST REPAIR ANY DAMAGE TO PAVEMENT CAUSED BY ERRANT BORING AT THEIR COST.



NOTE:

SENSITIVE ENVIRONMENTAL AREA. NO PARKING, NO WORK AND NO STORING OF EQUIPMENT OR SUPPLIES IN THESE SENSITIVE ENVIRONMENTAL AREAS.

Computer File Information		Index of Revisions		As Constructed		BORING DETAILS		Project No./Code	
Creation Date: 02/18/08	Initials: SRB			No. Revisions:		Designer: SRB	Structure	IM 070A-003	
Last Modification Date: 02/22/08	Initials: SRB			Revised:		Detailer: SRB	Numbers	16701	
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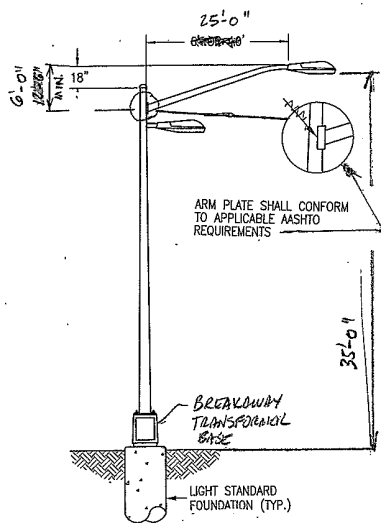


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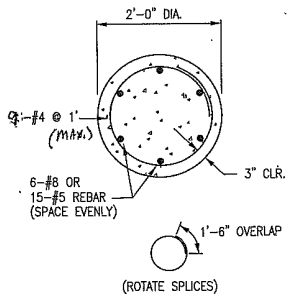
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18500 East Colfax
Aurora, CO 80011
Phone: (303) 365-7340
FAX: (303) 365-7343



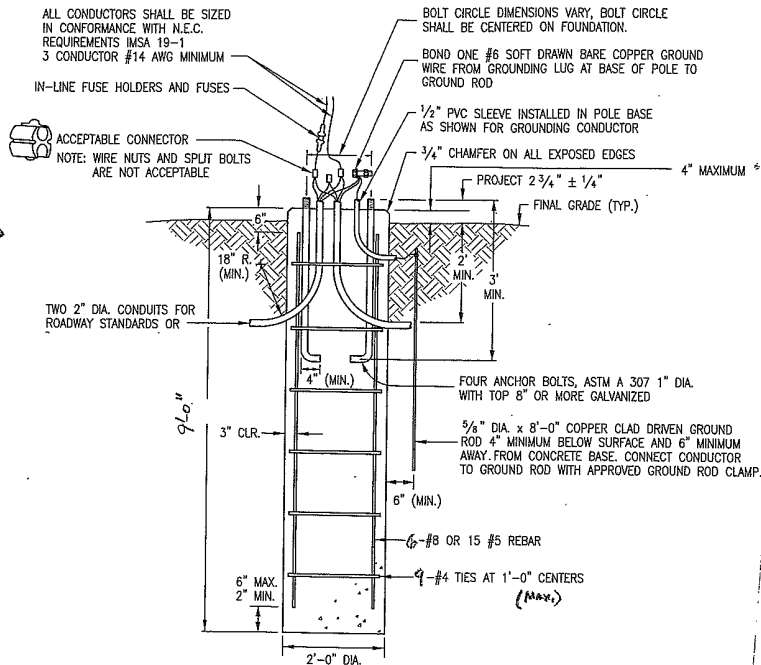
4601 DTC Blvd.
Suite 700
Denver, CO 80237
Phone: (303) 221-7275
Fax: (303) 221-7276



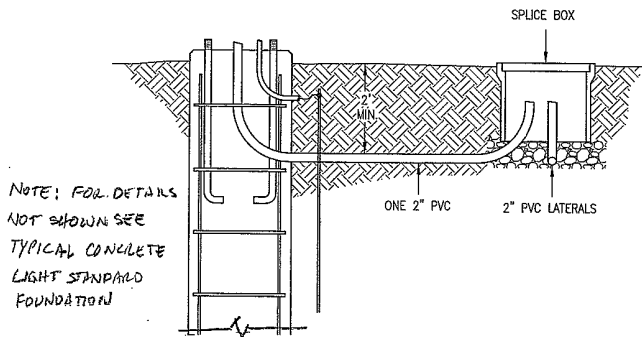
LIGHT STANDARD



TYPICAL FOUNDATION SECTION



TYPICAL CONCRETE LIGHT STANDARD FOUNDATION



NOTE: FOR DETAILS NOT SHOWN SEE TYPICAL CONCRETE LIGHT STANDARD FOUNDATION

ALTERNATIVE CONCRETE LIGHT STANDARD FOUNDATION WITH SPLICE BOX

GENERAL NOTES

- REFER TO THE ROADWAY PLANS FOR THE ACTUAL CONFIGURATION AND LOCATION OF LIGHT STANDARDS.
- FOR CONDUIT, PULL OR SPLICE BOX, CONTROL CENTER, AND CABINET DETAILS SEE STANDARD PLAN M-613-1 SHEET 4 OF 4.
- LIGHT STANDARDS SHALL NOT BE PLACED IN DITCHES OR OTHER LOW AREAS. EMBANKMENT AND BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 203.
- POLE CAPS ARE REQUIRED.
- BREAK-AWAY TRANSFORMER BASES SHALL BE INCLUDED ON ALL LIGHT STANDARDS. FOR DETAILS SEE STANDARD PLAN NO. M-613-1 SHEET 2 OF 4.
- CONCRETE FOR CAISSON FOUNDATIONS SHALL BE AIR ENTRAINED CLASS BZ CONCRETE IN ACCORDANCE WITH SECTION 503 OF THE STANDARD SPECIFICATIONS.
- DRILLED FOUNDATION CONCRETE SHALL REACH THE SEVEN DAY PREDICTED STRENGTH PRIOR TO INSTALLING THE LIGHT STANDARD.
- DRILLED SHAFT FOUNDATIONS SHALL BE PLACED AGAINST UNDISTURBED EARTH. PRECAST CONCRETE FOUNDATIONS ARE NOT ALLOWED.
- CABINET BASE OR PAD AND LEVELLING CONCRETE SHALL BE CLASS B CONCRETE.
- REINFORCING STEEL FOR FOUNDATIONS SHALL BE GRADE 60.
- WELDING OF STEEL SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWS D1.1 ALL AREAS TO BE WELDED SHALL BE GROUND TO BRIGHT METAL. ALL WELDING AND REQUIRED TESTING SHALL BE COMPLETE BEFORE ANY MATERIAL IS GALVANIZED. ALL CIRCUMFERENTIAL WELDS SHALL BE NON-DSTRUCTIVELY TESTED USING THE ENHANCED MAGNETIC PARTICLE METHOD IN ACCORDANCE WITH SUBSECTION 509.18 (D) OF THE STANDARD SPECIFICATIONS. THE ACCEPTANCE CRITERIA IS STATED IN TABLE 6.1 OF ANSI/AWS D1.1.
- LIGHT STANDARDS SHALL BE DESIGNED AND CONSTRUCTED TO THE DESIGN CRITERIA LISTED ON THIS SHEET AND IN THE SPECIAL PROVISIONS.
- WORKING DRAWINGS AND DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER.

LUMINAIRE AND ELECTRIC NOTES

- LUMINAIRES WITH LAMPS RATED MORE THAN 3200 LUMENS SHALL BE IESNA FULL CUTOFF DISTRIBUTION
- FLAT LENS IS REQUIRED ON ALL INSTALLATIONS.
- PHOTO ELECTRIC CONTROLS SHALL BE LOCATED AT THE LIGHTING CONTROL CENTER. SEE CDOT STANDARD PLAN NO. M-613-1 SHEET 4 OF 4. DETAILS FOR ADDITIONAL INFORMATION.

DESIGN CRITERIA

GENERAL

- LIGHT STANDARDS AND FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 4TH EDITIONS INCLUDING INTERIMS THROUGH 2006. LIGHT STANDARDS SHALL BE DESIGNED AND CONSTRUCTED TO THE FATIGUE REQUIREMENTS IN THESE PUBLICATIONS.
- A DESIGN WIND VELOCITY OF 100 MPH AND ONE 12' LANE WITH A 65 MPH TRUCK-INDUCED GUST LOADING SHALL BE USED FOR DESIGN.
- GALLOPING LOADS ARE EXCLUDED FROM FATIGUE DESIGN AND CATEGORY 2 IMPORTANCE FACTORS SHALL BE USED.

FOUNDATION DESIGN

- FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING SOIL PARAMETERS:
 SOIL DENSITY $\gamma = 110$ LB./CU. FT.
 SOIL COHESION = 750 LB./SQ. FT. FOR MEDIUM DENSITY COHESIONLESS SOIL
 SOIL ϕ ANGLE = 30° FOR MEDIUM DENSE COHESIONLESS SOIL
 SF = 1.25 FOR TORSIONAL RESISTANCE AND 3.0 FOR FLEXURAL RESISTANCE
- THE CONTRACTOR SHALL OBTAIN SOIL SAMPLES PRIOR TO FOUNDATION CONSTRUCTION TO VERIFY THAT AS-DESIGNED SOIL PROPERTIES ADEQUATELY MATCH THE IN-SITU SOIL PROPERTIES. THE CONTRACTOR SHALL FORWARD COPIES OF THE SOIL DATA TO THE ENGINEER PRIOR TO FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL STOP FOUNDATION INSTALLATION AND CONTACT THE ENGINEER IF ANY OF THE FOLLOWING SOIL CONDITIONS ARE ENCOUNTERED DURING DRILLING:
 (A) THE SOIL HAS A HIGH ORGANIC CONTENT OR CONSISTS OF STAUATED SILT AND CLAY
 (B) THE SITE WILL NOT SUPPORT THE WEIGHT OF THE DRILLING RIG
 (C) THE FOUNDATION SOILS ARE NOT HOMOGENIOUS
 (D) FIRM BEDROCK IS ENCOUNTERED

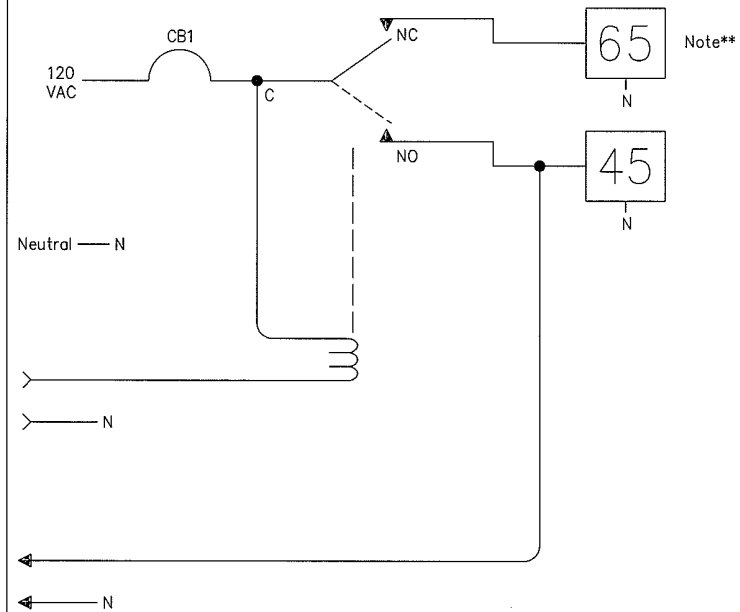
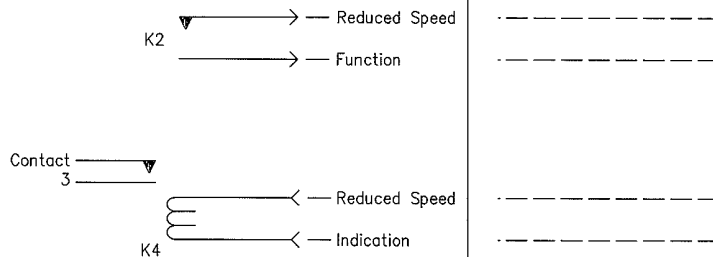
PRELIMINARY

SPECIAL LIGHT STANDARD DETAILS
CHAIN STATIONS

1/119

CS2
(Chain Station Control System Control Box)



Wiring & Conduit*

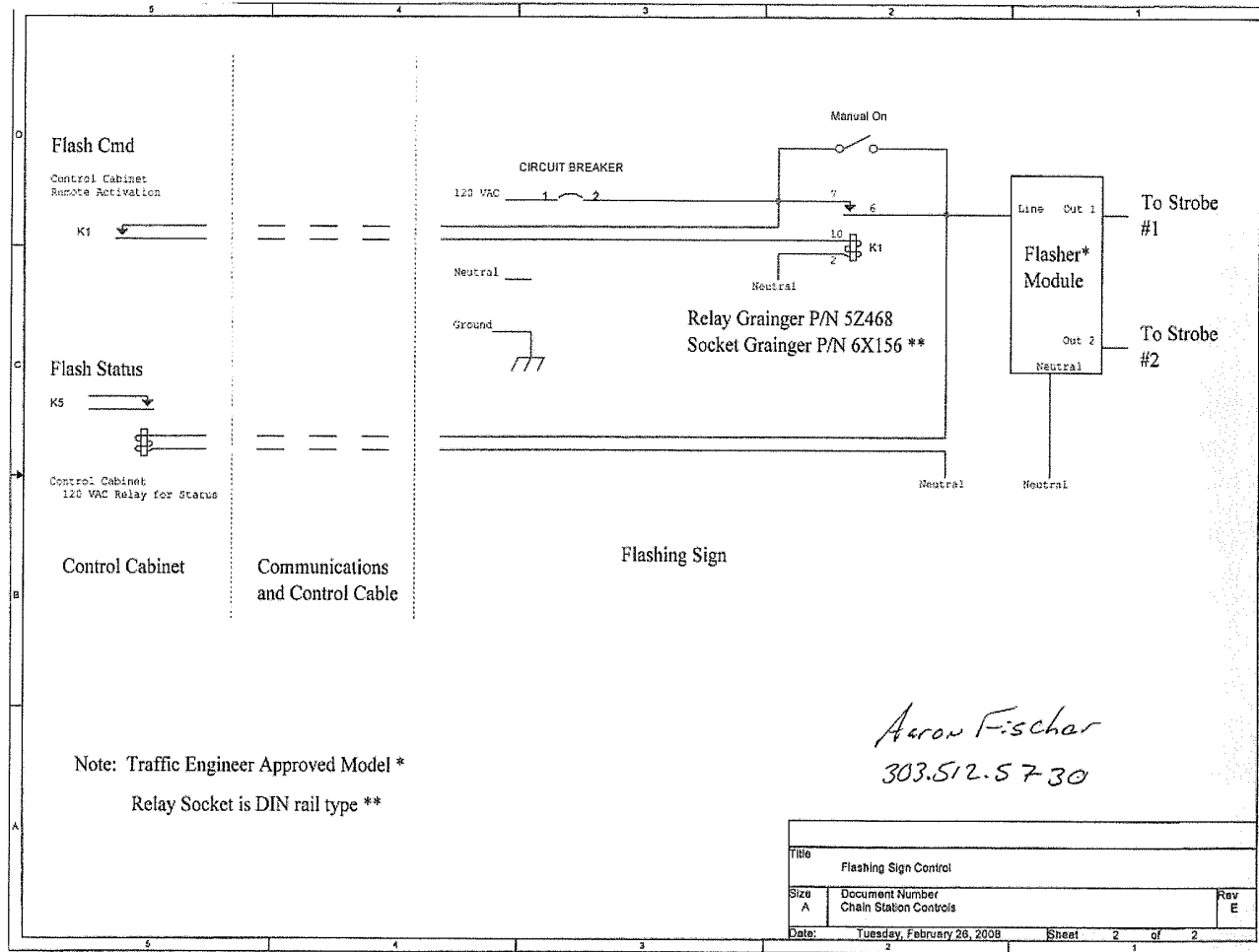


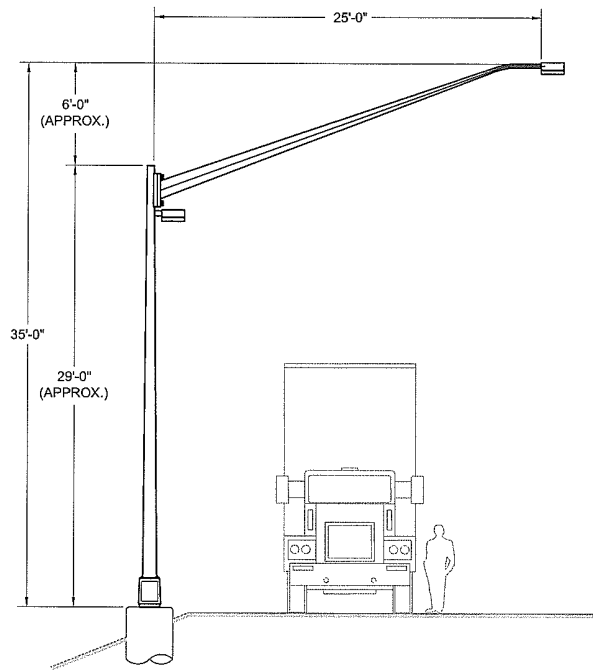
*Notes: * "Typical" Length 75'.
 (R-8) 8 Conductor, #18 Stranded, Spiral Bound Non-Shielded, Non-paired. Same Conduit as Sign Power OK, but use separate Cabling Bundle.

**Assumes, but not Required, 120 VAC Operating Voltage.

(R-8) Speed Limit 65/55/45 OR 60/50/40 Sign

Computer File Information		Index of Revisions		 Region 1 18500 East Colfax Aurora, CO 80011 Phone: (303) 365-7340 FAX: (303) 365-7343 REGION I DW	 4601 DTC Blvd. Suite 700 Denver, CO 80237 Phone: (303) 221-7275 Fax: (303) 221-7276	As Constructed		Telecommunications Variable Speed Limit Sign		Project No./Code	
Creation Date: 02/18/08	Initials: SRB					No. Revisions:	Designer: SRB	Structure:		IM 070A-003	
Last Modification Date: 02/22/08	Initials: SRB			Revised:	Detailer: SRB	Numbers:		16701			
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Drawing File Name: controls06.dgn											
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A TYPICAL CHAIN STATION LIGHT STANDARD
NOT TO SCALE

TABULATION OF APPROXIMATE QUANTITIES

ITEM NUMBER	LONG DESCRIPTION	UNIT	QUANTITY	NOTES
613-01200	2 INCH ELECTRICAL CONDUIT (PLASTIC)	LF	29,500	
613-10010	WIRING (SPECIAL)	LS	35	
613-34350	LIGHT STANDARD METAL (35 FDOT)	EA	11	
613-34351	LIGHT STANDARD METAL (35 FDOT) (SPECIAL) (1 ARM)	EA	235	
613-40101	LIGHT STANDARD FOUNDATION (SPECIAL)	EA	246	
613-50100	LIGHTING CONTROL CENTER	EA	18	1
613-75150	LUMINAIRE METAL HALIDE (150 WATT)	EA	481	

NOTES:

- LIGHTING CONTROL CENTER TO BE 'CABINET' TYPE PER CDDT STANDARD M-613-1.

LEGEND:

- (1) 150W MH, FULL CUTOFF ROADWAY LUMINAIRE INSTALLED ON A 29' POLE.
- (2) 150W MH, FULL CUTOFF ROADWAY LUMINAIRES INSTALLED ON A 29' POLE AND 25'-0" MAST ARM.
- 24" DEEP TRENCH, BURY ELECTRICAL RACEWAY. RACEWAY TO BE (3*4 THWN & 1*4 GND).
- NEW LIGHTING CONTROL CENTER PER CDDT STANDARD M-613-1.

CLANTON & ASSOCIATES LIGHTING DESIGN AND ENGINEERING
1699 N. JUPITER COURT SOUTH STE. 102
DENVER, CO 80237
303-433-7229

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As Constructed
No. Revisions:
Revised:
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LIGHTING PLAN TABULATIONS AND DETAIL		
Designer:	GF	Structure
Detailer:	JE	Numbers
Sheet Subset:	LE	Subset Sheets:

Project No./Code
IM 070A-003
16701
Sheet Number: 22

PRELIMINARY
SUBJECT TO REVISION