FHWA OVERSIGHT YES ☐ NO ■
NHS SYSTEM YES ■ NO ☐

SUBACCOUNT NO. 10739

COLORADO
DEPARTMENT OF TRANSPORTATION

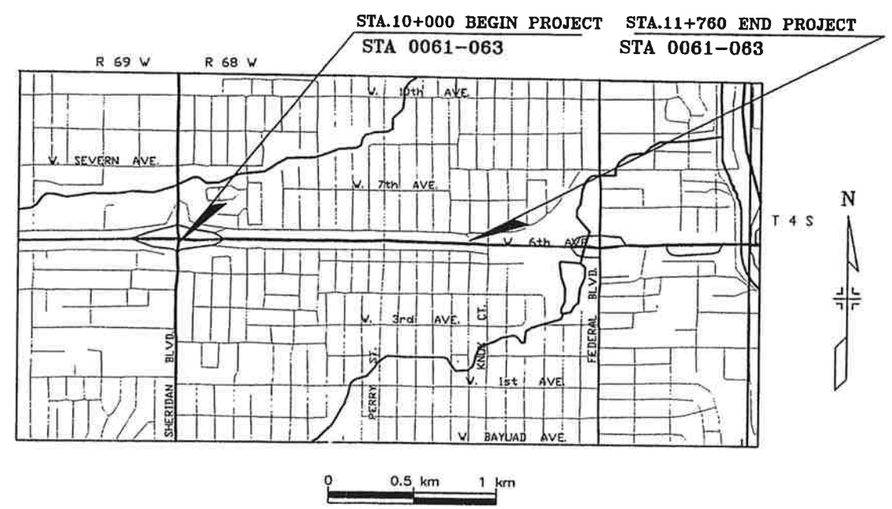
PLAN OF ~~PROPOSED~~ FINAL

FEDERAL AID PROJECT NO. STA 0061-063
STATE HIGHWAY NO. 6
DENVER COUNTY

TABULATION OF LENGTH

STA. TO STA.	ROADWAY METERS	KILOMETERS
10+000 BEGIN PROJ. STA 0061-063 (SHERIDAN BLVD.) 11+760 END PROJ. STA 0061-063 (KNOX COURT)	1760	1.76
TOTALS	1760	1.76
SUMMARY	METERS	KILOMETERS
PROJECT (NET LENGTH)	1760	1.76

SCALES OF ORIGINAL DRAWINGS
ON PLAN 1 cm = 5 m



INDEX OF SHEETS

SHEET NO.	
1	TITLE SHEET
2	STANDARD PLANS LIST
3	TYPICAL WALL PLACEMENT DETAILS
4-7	SUMMARY OF APPROXIMATE QUANTITIES
8	TYPICAL WALL PATTERN DETAIL
9	GENERAL NOTES
10-11	TABULATION OF CURB, GUTTER, AND SIDEWALK
12	TABULATION OF GUARDRAIL, WATER METERS, FIRE HYDRANTS, AND DRAINAGE ITEMS
13-14	TABULATION OF REMOVALS AND RESETS
15-30	ROADWAY PLAN SHEETS - NORTH FRONTAGE ROAD
31-46	ROADWAY PLAN SHEETS - SOUTH FRONTAGE ROAD
47	GENERAL INFORMATION AND SUMMARY OF QUANTITIES FOR WALL PLANS
48-57	NORTH FRONTAGE ROAD WALLS GENERAL LAYOUTS
58-71	SOUTH FRONTAGE ROAD WALLS GENERAL LAYOUTS
72	NORTH FRONTAGE ROAD WALL N14 (STR. NO. F-16-X) GENERAL LAYOUT AND QUANTITIES
73-74	SOUTH FRONTAGE ROAD WALL S13 (STR. NO. F-16-AQ) GENERAL LAYOUT AND QUANTITIES
75	WALL LOCATION COORDINATES
76-77	FENCE MASONRY SOUND BARRIER DETAILS
78	FENCE COMPOSITE SOUND BARRIER ON RETAINING WALL
79	FENCE MASONRY SOUND BARRIER ON GUARDRAIL
80	FENCE COMPOSITE SOUND BARRIER ON GUARDRAIL
81	IRRIGATION QUANTITIES
82-88	IRRIGATION PLANS AND DETAILS
89	LANDSCAPING MATERIAL QUANTITIES AND NOTES
90-91	LANDSCAPING PLNAS
92	STORMWATER MANAGEMENT PLAN
93	TABULATION OF ITS CONDUIT AND PULL BOXES
94-105	ITS CONDUIT INSTALLATION PLANS
106-107	PULL BOX (SPECIAL) DETAILS, TRENCHING DETAILS, AND JACK AND BORE CONDUIT DETAILS
108-109	LIGHTING AND ELECTRICAL GENERAL INFORMATION AND QUANTITIES TABULATION
110-115	LIGHTING FIXTURE SCHEDULE AND PLANS
116	LIGHTING AND ELECTRICAL DETAILS
117	TABULATION OF SIGNING AND SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES
118-119	TABULATION OF SIGNS
120-122	SIGNING AND STRIPING PLANS
123	TRAFFIC CONTROL PLAN
124	TABULATION OF PAVEMENT MARKINGS
125	OVERHEAD CROSS SECTION
126-138	OVERHEAD SIGN TABULATION AND DETAILS
139	DENVER WATER FIRE HYDRANT AND WATER METER DETAILS
140-153	RIGHT OF WAY PLANS

NEW AND REVISED STANDARDS
M-107-1 TEMPORARY EROSION CONTROL (4 SHEETS) MARCH 24,1997
M-629-1 SURVEY MONUMENTS (2 SHEETS) AUGUST 28, 1997

AS CONSTRUCTED INFORMATION
CONTRACTOR GRIMM CONSTRUCTION CO, INC.
RESIDENT ENGINEER A.P. (SKIP) HLAD
(Project or Resident)
PROJECT STARTED SEPTEMBER 28, 1998
PROJECT COMPLETED JULY 15, 1999
AS CONSTRUCTED PLANS APPROVED
TITLE DATE

Computer File Information					
Creation Date: 10/10/97	Initials: TRM	(R-1)	07/14/98	Revised Sheets 1,4,9	ERM
Last Modification Date: 07/14/98	Initials: TRM				
Full Path: C:\10739					
Drawing File Name: TITLE.DWG					

Colorado Department of Transportation
Region 6
J.K.K./REGION 6

As Constructed
No Revisions: mm/dd/yy
Revised: 07/15/99 mm/dd/yy
Void: mm/dd/yy

TITLE SHEET

Project No./Code
STA 0061-063
10739
Sheet Number 1

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			
NO REVISIONS	REVISED 7/14/98	VOID	

R-1 7/14/98 – Deleted Quantities 8/15/99

CDOT	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
	VIII	COLO.	STA 0061-063	4

INDEX BOOK	INDEX PAGE	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY PLAN	ROADWAY AS CONST.	PROJECT TOTALS PLAN	PROJECT TOTALS AS CONST.
			201	CLEARING AND GRUBBING	L S	1	1	1	1
			202	TREE TRIMMING	L S	1	1	1	1
			202	REMOVAL OF STRUCTURE	EACH		1		1
			202	REMOVAL OF SIDEWALK	M2	1,776	1115.1	1,776	1115.1
			202	REMOVAL OF CURB AND GUTTER	M	2,206	2009	2,206	2009
			202	REMOVAL OF ASPHALT MAT	M2		893.7		893.7
			202	REMOVAL OF PAVEMENT MARKING	M2	70	0	70	0
			202	REMOVAL OF GROUND SIGN	EACH	38	38	38	38
			202	REMOVAL OF SIGN PANEL	EACH	19	19	19	19
			202	REMOVAL OF FENCE	M	760	800	760	800
			202	REMOVAL OF GUARDRAIL TYPE 3	M	30	183	30	183
			202	REMOVAL OF GUARDRAIL TYPE 4	M	595	176	595	176
			203	POTHOLING	HOUR	300	137	300	137
			203	DOZING (LANDSCAPING)	HOUR		24		24
			R-1 ~~206~~	~~STRUCTURE EXCAVATION~~	~~M3~~	~~1,000~~	DELETED	~~1,000~~	DELETED
			R-1 ~~206~~	~~STRUCTURE BACKFILL (CLASS 1)~~	~~M3~~	~~18~~	DELETED	~~18~~	DELETED
			R-1 ~~206~~	~~STRUCTURE BACKFILL (CLASS 2)~~	~~M3~~	~~1,500~~	DELETED	~~1,500~~	DELETED
			208	EROSION BALES (WEED FREE)	EACH	50	0	50	0
			208	SILT FENCE	M	130	0	130	0
			210	RESET WATER METER	EACH	7	10	7	10
			210	RESET FIRE HYDRANT	EACH	2	2	2	2
			210	RESET FIRE HYDRANT (ADJUSTMENT)	EACH		1		1
			210	RESET GROUND SIGN	EACH	5	12	5	12
			210	RESET SIGN PANEL	EACH	10	10	10	10
			210	RESET FENCE	M	1,200	1245	1,200	1245
			210	RESET END ANCHORAGE	EACH		1		1
			210	RESET GUARDRAIL TYPE 3 (SPECIAL)	M	809	808	809	808
			210	MODIFY STRUCTURE	EACH		1		1
			212	SEEDING (NATIVE)	HA	0.5	0.5	0.5	0.5
			212	SEEDING (LAWN)	HA	0.26	0.26	0.26	0.26
			212	SOD	M2		1333.2		1333.2
			212	SOIL PREPARATION (SPECIAL)	HA	0.46	0.28	0.46	0.28
			213	MULCHING (WEED FREE)	HA	0.5	0	0.5	0
			213	MULCHING (WOOD CHIP)	M3	285	285	285	285
			213	MULCHING (HYDRAULIC)	HA	0.76	0.76	0.76	0.76
			213	METAL LANDSCAPE BORDER (3X100 MM)	M	371	389	371	389
			214	LANDSCAPE MAINTENANCE	L S	1	1	1	1
			214	DECIDUOUS TREE (50 MM CALIPER)	EACH	21	21	21	21
			214	DECIDUOUS SHRUB (NO. 5 CONTAINER)	EACH	104	104	104	104
			214	EVERGREEN TREE (2.4 METER) (BALL AND BURLAP)	EACH	18	17	18	17

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SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			CDOT	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 7/15/99	VOID		VIII	COLO.	STA 0061-063	5

INDEX BOOK	INDEX PAGE	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY PLAN	ROADWAY AS CONST.	PROJECT TOTALS PLAN	PROJECT TOTALS AS CONST.
			214	EVERGREEN SHRUB (NO. 5 CONTAINER)	EACH	7	7	7	7
			214	PERENNIALS (NO. 1 CONTAINER)	EACH	161	161	161	161
			217	HERBICIDE TREATMENT	M2	1,875	0	1,875	0
			304	AGGREGATE BASE COURSE (CLASS 6)	T	8,200	0	8,200	0
			304	AGGREGATE BASE COURSE (CLASS 6)	M2		833.2		833.2
			403	HOT BITUMINOUS PAVEMENT (PATCHING) (ASPHALT)	T	427	233.07	427	233.07
			412	CONCRETE PAVEMENT (150 MM)	M2	140	365.7	140	365.7
			503	DRILLED CAISSON (450 MM)	M	345	375	345	375
			503	DRILLED CAISSON (600 MM)	M	968	955	968	955
			503	DRILLED CAISSON (1222 MM)	M	6.6	6.6	6.6	6.6
			509	STRUCTURAL STEEL (GALVANIZED)	KG	32,660.001	36356.01	32,660.001	36356.01
			601	STRUCTURAL CONCRETE COATING (ANTI-GRAF)	M2		7700		7700
			604	VANE GRATE INLET (2 M)	EACH	1	1	1	1
			606	GUARDRAIL TYPE 4 (SPECIAL)	M	465	505	465	505
			606	GUARDRAIL TYPE 4 (SPECIAL) (CE ADJUSTMENT)	M		128		128
			607	FENCE (TEMPORARY)	M	500	500	500	500
			607	FENCE MASONRY (SOUND BARRIER)	M2	4,236	4245.1	4,236	4245.1
			607	FENCE COMPOSITE (SOUND BARRIER)	M2	1,222	1304.5	1,222	1304.5
			608	CONCRETE SIDEWALK	M2	1,976	1941.5	1,976	1941.5
			608	CONCRETE CURB RAMP	M2	240	159.1	240	159.1
			609	CURB AND GUTTER TYPE 2 (SECTION II-M)	M	1,462	1424	1,462	1424
			610	MEDIAN COVER MATERIAL (CONCRETE)	M2		379.2		
			613	50 MM ELECTRICAL CONDUIT	M	181	183	181	183
			613	50 MM ELECTRICAL CONDUIT (JACKED)	M	481	824	481	824
			613	50 MM ELECTRICAL CONDUIT (PLASTIC)	M	2,309	1983	2,309	1983
			613	PULL BOX (SPECIAL)	EACH	13	11	13	11
			613	WIRING	L S	1	1	1	1
			613	LIGHT STANDARD STEEL (11.9 METER)	EACH	1	1	1	1
			613	LIGHT STANDARD STEEL (12.2 METER)	EACH	22	22	22	22
			613	CONCRETE FOUNDATION PAD	EACH	23	23	23	23
			613	LUMINAIRE HIGH PRESSURE SODIUM (250 WATT)	EACH	15	15	15	15
			613	LUMINAIRE HIGH PRESSURE SODIUM (400 WATT)	EACH	8	8	8	8
			613	LUMINAIRE HIGH PRESSURE SODIUM (WALL TYPE) (250 WATT)	EACH	8	8	8	8
			614	SIGN PANEL (CLASS I)	M2	14	14.1	14	14.1
			614	SIGN PANEL (CLASS II)	M2	12	12.3	12	12.3
			614	SIGN PANEL (CLASS III)	M2	28	27.7	28	27.7

17-Jun FD6$DISK(MELLINTQ113BB.DXF

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			CDOT	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 7/15/99	VOID		VIII	COLO.	STA 0061-063	6

INDEX BOOK	INDEX PAGE	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY PLAN	ROADWAY AS CONST.	PROJECT TOTALS PLAN	PROJECT TOTALS AS CONST.
			614	TIMBER SIGN POST 89X89 MM	M	40	40	40	40
			614	TIMBER SIGN POST 140X140 MM	M	70	70	70	70
			614	STEEL SIGN POST (U-3)	M	53	52	53	52
			614	STEEL SIGN POST (W 150X18)	M	12	9	12	9
			614	CONCRETE FOOTING (TYPE 1)	EACH	2	2	2	2
			614	CANTILEVER STRUCTURE (7 TO LESS THAN 9 METER FRAME)	EACH	1	1	1	1
			614	IMPACT ATTENUATOR (SANDWICH SYSTEM)	EACH	1	1	1	1
			617	300 MM CULVERT PIPE	M	15	12	15	12
			619	DN25 COPPER PIPE	M		48		48
			619	DN50 COPPER PIPE	M	48	0	48	0
			619	DN25 PLASTIC PIPE	M	810	1103	810	1103
			619	DN32 PLASTIC PIPE	M	212	0	212	0
			619	DN40 PLASTIC PIPE	M	53	0	53	0
			619	DN50 PLASTIC PIPE	M	230	0	230	0
			619	DN100 PLASTIC PIPE	M	0.99	0	0.99	0
			620	FIELD OFFICE (CLASS 2)	EACH	1	1	1	1
			620	FIELD LABORATORY (CLASS 2)	EACH	1	1	1	1
			620	SANITARY FACILITY	EACH	1	1	1	1
			623	IRRIGATION BUBBLER	EACH	66	142	66	142
			623	DN300 POP-UP SPRAY SPRINKLER	EACH	32	22	32	22
			623	DN40 POP-UP ROTARY SPRINKLER	EACH	102	30	102	30
			623	DN90 POP-UP ROTARY SPRINKLER	EACH	16	10	16	10
			623	DN25 BACKFLOW PREVENTER	EACH		2		2
			623	DN50 BACKFLOW PREVENTER	EACH	2	0	2	0
			623	DN25 DRAIN VALVE	EACH	3	3	3	3
			623	DN25 AUTOMATIC CONTROL VALVE	EACH	1	18	1	18
			623	DN32 AUTOMATIC CONTROL VALVE	EACH	2	0	2	0
			623	DN40 AUTOMATIC CONTROL VALVE	EACH	6	0	6	0
			623	DN50 AUTOMATIC CONTROL VALVE	EACH	6	0	6	0
			623	CONTROL WIRE 24 VOLT	M	950	839	950	839
			623	DN25 QUICK-COUPLER VALVE	EACH	4	2	4	2
			623	DN25 GATE VALVE	EACH		2		2
			623	DN50 GATE VALVE	EACH	2	0	2	0
			623	DN25 WATER METER	EACH		2		2
			623	DN50 WATER METER	EACH	2	0	2	0
			623	8 STATION AUTOMATIC CONTROLLER	EACH	2	0	2	0
			623	12 STATION AUTOMATIC CONTROLLER	EACH		2		2

17-Jun- FD6$DISK(MELLINTJ0113BC.DXF

SUMMARY OF APPROXIMATE QUANTITIES

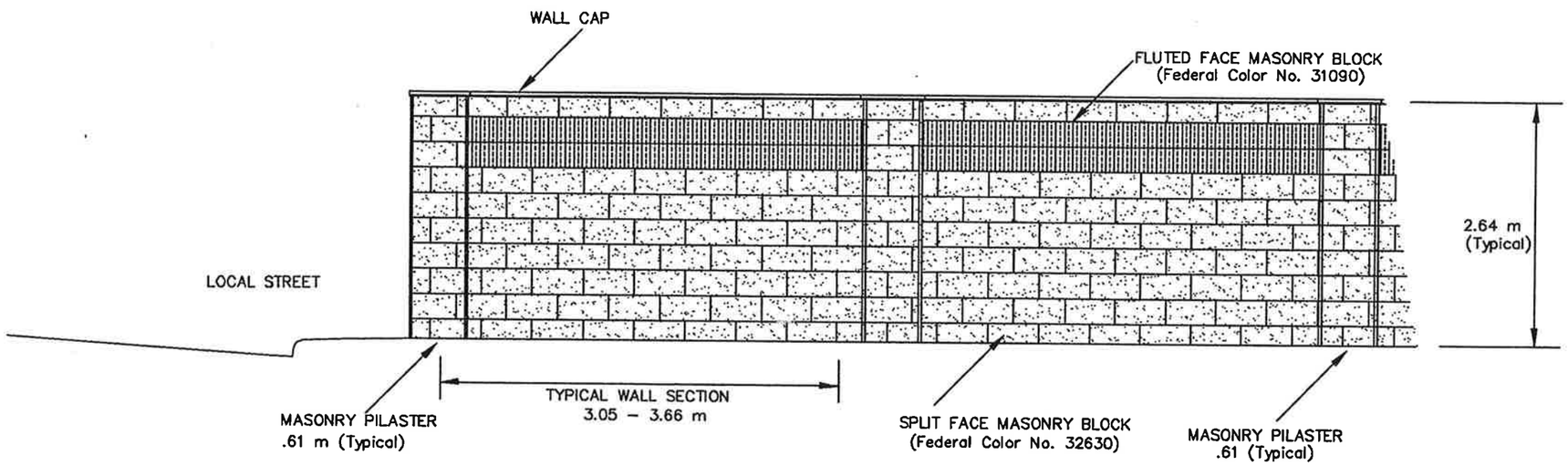
AS CONSTRUCTED		
NO REVISIONS	REVISED 7/15/99	VOID

CDOT	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
	VIII	COLO.	STA 0061-063	7

INDEX BOOK	INDEX PAGE	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY PLAN	ROADWAY AS CONST.	PROJECT TOTALS PLAN	PROJECT TOTALS AS CONST.
			625	CONSTRUCTION SURVEYING	L S	1	1	1	1
			626	MOBILIZATION	L S	1	1	1	1
			626	PUBLIC INFORMATION SERVICES	LS		1		1
			627	THERMOPLASTIC PAVEMENT MARKING	M2	46	0	46	0
			627	PREFORMED PLASTIC PAVEMENT MARKING (TYPE A)	M2	15	0	15	0
			627	PREFORMED PLASTIC PAVEMENT MARKING (TYPE B) (XWALK-STOPLINE)	M2	12	0	12	0
			630	FLAGGING	HOUR	1,000	1125	1,000	1125
			630	TRAFFIC CONTROL SUPERVISOR	DAY	150	182	150	182
			630	UNIFORMED TRAFFIC CONTROL	HOUR	50	0	50	0
			630	TRAFFIC CONTROL INSPECTION	DAY	100	109	100	109
			630	BARRICADE (TYPE 3 M-B) (TEMPORARY)	EACH	22	22	22	22
			630	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EACH	78	76	78	76
			630	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EACH	65	84	65	84
			630	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE C)	EACH	8	6	8	6
			630	CONSTRUCTION TRAFFIC SIGN (SPECIAL)	M2	6	1	6	1
			630	PORTABLE MESSAGE SIGN PANEL	EACH	4	4	4	4
			630	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (C TYPE)	EACH	8	7	8	7
			630	DRUM CHANNELIZING DEVICE	EACH	100	100	100	100
			630	DRUM CHANNELIZING DEVICE (WITH LIGHT) (FLASHING)	EACH	30	30	30	30
			630	CONCRETE BARRIER (TEMPORARY)	M	600	659	600	659
			630	FLASHING BEACON (PORTABLE)	EACH		4		4
			630	TRAFFIC CONE	EACH	100	145	100	145
			630	ATTENUATON (SAND FILL) (TEMPORARY)	EACH		1		1
				FORCE ACCOUNT ==========					
			700	F/A MINOR CONTRACT REVISIONS	F A	1	1	1	1
			700	F/A PARTNERING	F A	1	0	1	0
			700	F/A OJT PILOT	F A	1	1	1	1
			700	F/A On-The-Job Trainee	F A	1	0	1	0
			700	F/A ESB PROGRAM	F A	1	0	1	0
			700	F/A OBTAIN POWER FROM PUBLIC SERVICE CO	F A	1	0	1	0
			700	F/A WATER TAPS FROM DENVER WATER	F A	1	1	1	1
			700	F/A LANDSCAPING RESTORATION	F A	1	0	1	0
			~~700~~	~~F/A ADJUST UTILITIES~~	~~F A~~	~~1~~		~~1~~	

17-Jun FD6$DISK(MELLINTQ113BD.DXF

TYPICAL WALL PATTERN



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Last Modification Date:	10/14/97	Initials:	TRM
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Drawing File Name:			PATTERN.DWG

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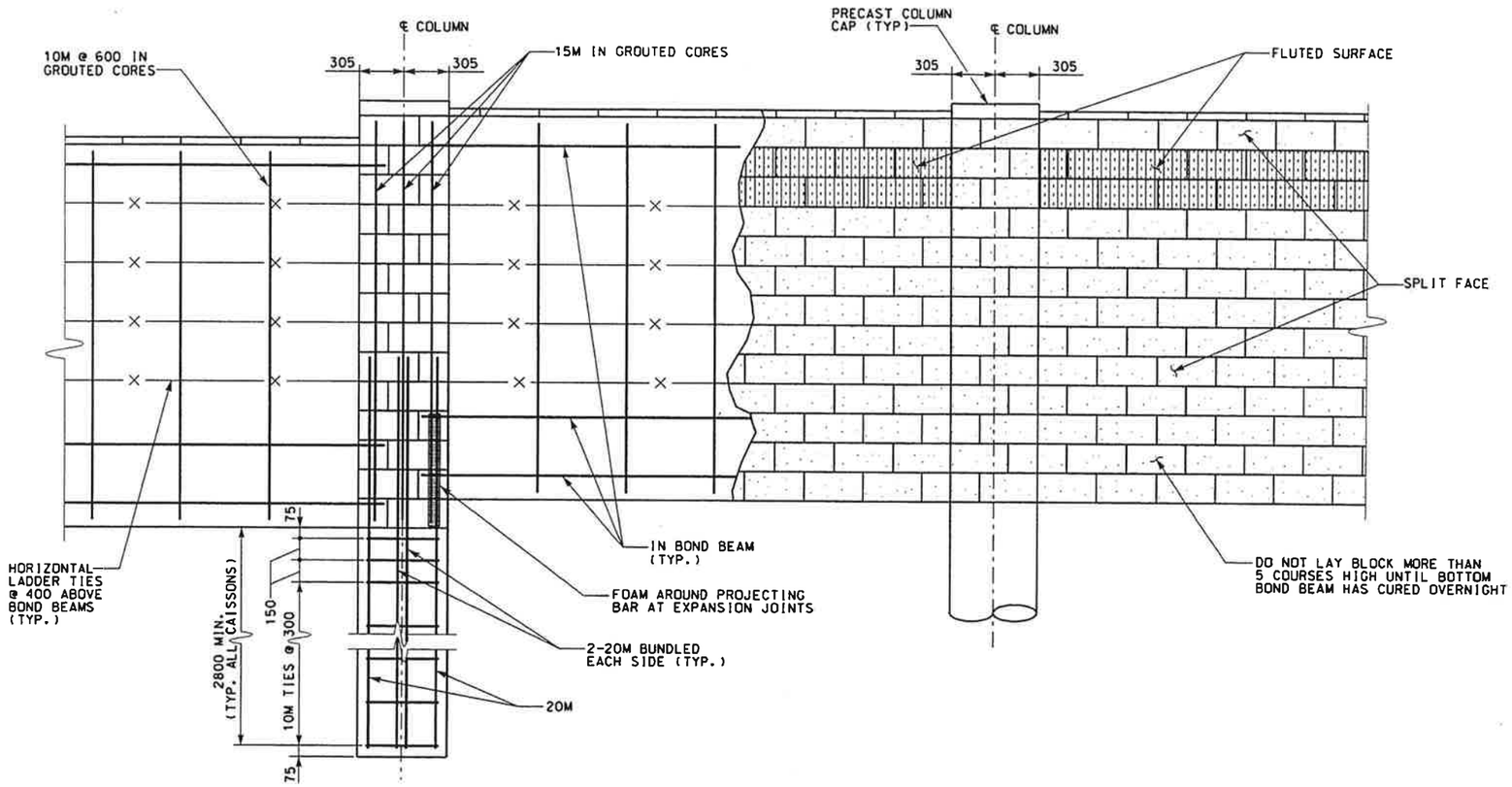
R-X	mm/dd/yy	XXXXX	XXX
R-X	mm/dd/yy	XXXXX	XXX
R-X	mm/dd/yy	XXXXX	XXX
R-X	mm/dd/yy	XXXXX	XXX

Colorado Department of Transportation
Region 6

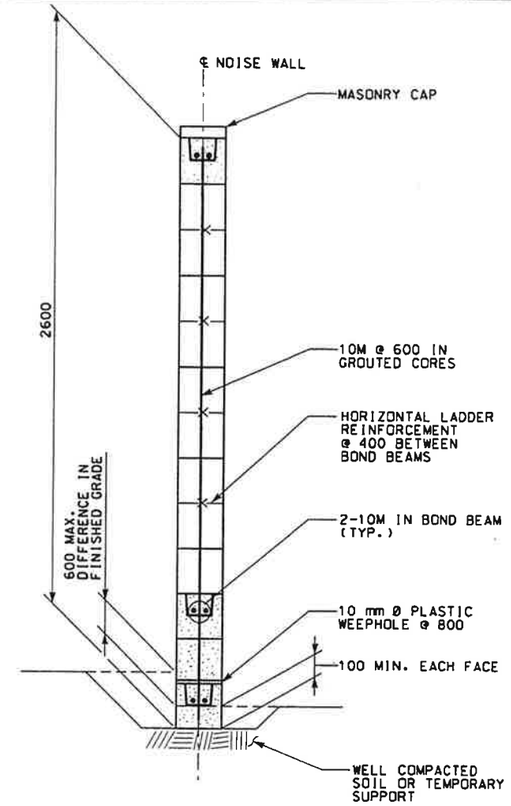
As Constructed	
No Revisions:	07/15/99 mm/dd/yy
Revised:	mm/dd/yy
Void:	mm/dd/yy

TYPICAL WALL PATTERN

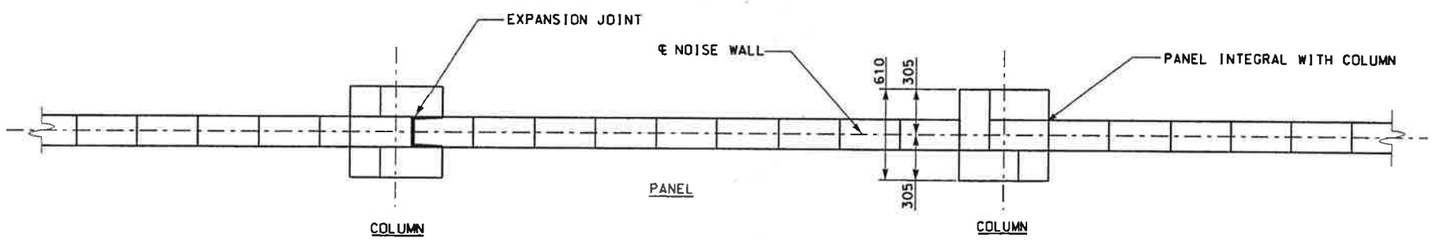
Project No./Code
STA 0061-063
10739
Sheet Number 8



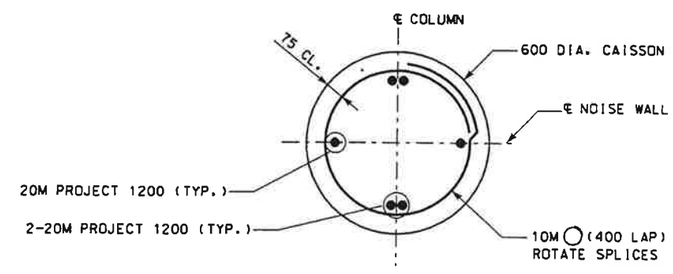
WALL REINFORCING/PARTIAL ELEVATION



TYPICAL PANEL SECTION



PARTIAL PLAN



CAISSON SECTION

NOTES:

1. PRECAST COLUMN CAP SHALL SLOPE TO SIDES OF WALL FOR DRAINAGE.
2. SEE GENERAL LAYOUT SHEETS FOR EXPANSION JOINT LOCATIONS.

Computer File Information		Sheet Revisions			Colorado Department of Transportation	As Constructed	FENCE MASONRY (SOUND BARRIER) DETAILS 1			Project No./Code
Creation Date: 02 DEC 97 Initials: XXX					2000 South Holly Street Denver, Colorado 80222 Phone: 303-757-9296 FAX: 303-757-9053	No Revisions: 07/15/99				STA 0061-063
Last Modification Date: 13:48:50 05 JUN 98 Initials: XXX						Revised:	Designer: J.B.	Structure Numbers		10739
Full Path: q:\641253\01000\docs\spropdet.sht						Void:	Detailer: J.L.W.			
Drawing File Name: ...\spropdet.sht					Region 6		Sheet Subset: BRIDGE	Subset Sheets: B-27 OF 31		Sheet Number 76
Acad Ver. Scale: 1:200 Units: METRIC										

DE LEUW, CATHER

ITEM	DESCRIPTION	NOTES	UNITS	QUANTITY I-3	QUANTITY I-4	QUANTITY TOTAL	FINAL QUANTITY
PIPE - FURNISH & INSTALL							
619-10047	DN100 WELDED STEEL PIPE (JACKED)		METERS	0.0	12.0	12.0	0
619-40160	DN50 COPPER PIPE		METERS	18.0	30.0	48.0	48
619-50080	DN25 PLASTIC PIPE		METERS	495.0	315.0	810.0	1103
619-50100	DN32 PLASTIC PIPE		METERS	124.0	88.0	212.0	0
619-50120	DN40 PLASTIC PIPE		METERS	27.0	26.0	53.0	0
619-50160	DN50 PLASTIC PIPE		METERS	100.0	130.0	230.0	0
VALVES - FURNISH & INSTALL							
623-05016	DN50 GATE VALVE	ISOLATION GATE VALVE	EACH	1	1	2	2
623-03108	DN25 AUTOMATIC CONTROL VALVE	RAINBIRD	EACH	-	1	1	18
623-03110	DN32 AUTOMATIC CONTROL VALVE	RAINBIRD	EACH	2	-	2	0
623-03112	DN40 AUTOMATIC CONTROL VALVE	RAINBIRD	EACH	4	2	6	0
623-03116	DN50 AUTOMATIC CONTROL VALVE	RAINBIRD	EACH	2	4	6	0
623-04008	DN25 QUICK COUPLER VALVE		EACH	2	2	4	2
623-02008	DN25 DRAIN VALVE	MANUAL	EACH	2	1	3	3
AUTOMATIC CONTROLLERS - FURNISH & INSTALL							
623-08108	8 STATION AUTOMATIC CONTROLLER	ALTEC. LEIT 8000-4 SOLAR CONTROLLER.	EACH	1	1	2	2
POP-UP SRPINKLERS - FURNISH & INSTALL							
623-00156	IRRIGATION BUBBLER	RAINBIRD	EACH	40	26	66	142
623-00212	DN300 POP-UP SPRAY SPRINKLER	RAINBIRD 1800 SERIES	EACH	18	14	32	22
623-00312	DN40 POP-UP ROTARY SPRINKLER	HUNTER I-20. 100mm RISERS	EACH	53	49	102	30
623-00328	DN90 POP-UP ROTARY SPRINKLER	HUNTER PGH. 300mm RISERS	EACH	10	6	16	10
P.O.C. - FURNISH & INSTALL							
623-01716	DN~~50~~ 25 BACKFLOW PREVENTER		EACH	1	1	2	2
623-07016	DN~~50~~ 25 WATER METER		EACH	1	1	2	2
VALVE CONTROL WIRE - FURNISH & INSTALL							
623-04000	CONTROL WIRE 24 VOLT		METERS	450	500	950	839
WATER TAP - FORCE ACCOUNT							
700-XXXXX	WATER TAPS		LUMP SUM	1	1	2	2

* INFORMATION ON IRRIGATION QUANTITIES IS FOR INFORMATION.
THE CONTRACTOR IS RESPONSIBLE FOR OWN QUANTITY TAKE OFFS.

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Last Modification Date:	14:37:33 15 JUN 98 Initials: XXX
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Acad Ver. Scale:	1:200 Units: METRIC

Sheet Revisions

Colorado Department of Transportation
DOT
DEPARTMENT OF TRANSPORTATION
Region 6
2000 South Holly Street
Denver, Colorado 80222
Phone: 303-757-9296 FAX: 303-757-9053

As Constructed
No Revisions:
Revised: 07/15/99
Void:

IRRIGATION QUANTITIES

Designer: J.R.L.
Detailer: P.M.N.
Structure Numbers
Sheet Subset:
Subset Sheets: I-1

Project No./Code
STA 0061-063
10739
Sheet Number 3

DE LEUW, CATHER

GENERAL IRRIGATION NOTES

1. The system design assumes a minimum dynamic pressure for the irrigation system of 60 psi at a minimum discharge of 50 gpm at the 2 inch point-of-connections. Verify pressure and flow on site prior to construction and report any discrepancies.

2. Locations of utilities are shown based on best available information, and may or may not be complete. The contractor shall call the Utility Notification Center of Colorado (UNCC) at least 2 days prior to any digging.

3. The drawings are diagramatic, therefore, please note the following:

   A. Irrigation components may be shown outside of planting areas for the sake of clarity. Install irrigation pipe and wiring within planting areas whenever possible. Avoid conflicts between the irrigation system and plant materials or architectural features.

   B. Use only standard tees and elbow fittings. Use of cross type fittings is not permitted.

4. Select nozzles for sprinkler heads with arcs which provide complete and adequate coverage with a minimum of over-spray for the site conditions. To the greatest extent possible, do not allow over-spray onto the wall or adjacent roadways.

5. Size pipe as shown on the plans. If any section of lateral pipe appears unmarked but is located between two sized sections, it should be assumed that the unmarked section is the same nominal size as the marked sections. Unsized pipe shall be 25 mm diameter pipe.

6. Do not install mainline pipe or valve boxes in low areas.

7. All unit prices shall include all incidental components, and components shown in Detail Drawings unless a separate pay item has been specifically referenced.

IRRIGATION FLAG NOTES:

(1) LOCATE, EXCAVATE, AND EXPOSE EXISTING WATER MAINLINE. COORDINATE EXCAVATION OF EXISTING PAVEMENT, PAVEMENT PATCHING, AND INSTALLATION OF TAPPING SADDLE AND VALVE WITH DENVER WATER BOARD. INSTALL METER AND CURB STOPS PER DENVER WATER BOARD STANDARDS AND SPECIFICATIONS.

(2) INSTALL TWO #14 AWG WIRES FROM CONTROLLER TO EACH AUTOMATIC CONTROL VALVE ASSEMBLY FOR USE AS A SPARE WIRE IN CASE OF CONTROL WIRE FAILURE. COIL 1 METER OF WIRE IN VALVE BOX. ROUTE WIRES IN SUCH A MANNER THAT EVERY REMOTE CONTROL VALVE HAS AT LEAST TWO SPARE WIRES COILED IN VALVE BOX.

INDICATES CONTROLLER STATION NUMBER

INDICATES LATERAL DISCHARGE IN LITERS PER MINUTE.

A8 / 25 — 26.36 GPM

INDICATES REMOTE CONTROL VALVE SIZE IN MILLIMETERS

IRRIGATION LEGEND

—WTR—	DENVER WATER LINE
— — — —	TYPE 'K' COPPER PIPE
————	MAINLINE PIPE: DN50, CLASS 200 PVC (UNLESS OTHERWISE NOTED)
————	LATERAL LINE PIPE: CLASS 160 PVC (DN25 SIZE UNLESS OTHERWISE NOTED)
— — — —	SLEEVING DN100 WELDED STEEL PIPE (JACKED)
■	IRRIGATION POINT-OF-CONNECTION (P.O.C.)
M	IRRIGATION ASSEMBLY (TAP, VALVE, METER, BACKFLOW PREVENTER)
◇	QUICK COUPLING VALVE ASSEMBLY
◕	AUTOMATIC CONTROL VALVE ASSEMBLY
⊗	GATE VALVE (ISOLATION) ASSEMBLY
⬡	DRAIN VALVE (MANUAL)
	DN300 POP-UP SPRAY SPRINKLER: RAINBIRD 1800 SERIES
	RAINBIRD 1812-SAM-PRS SPRAY HEAD WITH B-15 SERIES, NOZZLE PRESSURE: 30 PSI RADIUS 4.27 METERS
○	IRRIGATION BUBBLER: RAINBIRD STREAM BUBBLER 1806 W/ 5F-B SERIES, NOZZLE PRESSURE: 30 PSI
	DN40 POP-UP ROTORY SPRINKLER: HUNTER I-20 ULTRA SERIES*- 100 mm RISERS
◎	I-20-ADS-3.0 PRESSURE: 344 KPa RADIUS: 12.2 METER L/MIN: 10.2
□	I-20-ADS-1.5 PRESSURE: 344 KPa RADIUS: 10.4 METER L/MIN: 6.1
▲	I-20-ADS-2.0LA PRESSURE: 344 KPa RADIUS: 8.5 METER L/MIN: 7.9
	DN90 POP-UP ROTORY SPRINKLER: HUNTER PGH SERIES - 300 mm RISERS
△	PGH-ADV-04 PRESSURE: 344 KPa RADIUS: 10.4 METER L/MIN: 6.1
C	~~8~~ 12 STATION AUTOMATIC CONTROLLER: ALTEC LEIT 8000-4 SOLAR POWERED CONTROLLER UNIT

* WITH STAINLESS STEEL RISERS ONLY

Computer File Information		Sheet Revisions			Colorado Department of Transportation	As Constructed	IRRIGATION GENERAL NOTES			Project No./Code
Creation Date: 02 DEC 97 Initials:					2000 South Holly Street Denver, Colorado 80222 Phone: 303-757-9296 FAX: 303-757-9053	No Revisions:				STA 0061-063
Last Modification Date: $TIME$ $DATE$ Initials:						Revised: 07/15/99	Designer: J.R.L.	Structure Numbers		10739
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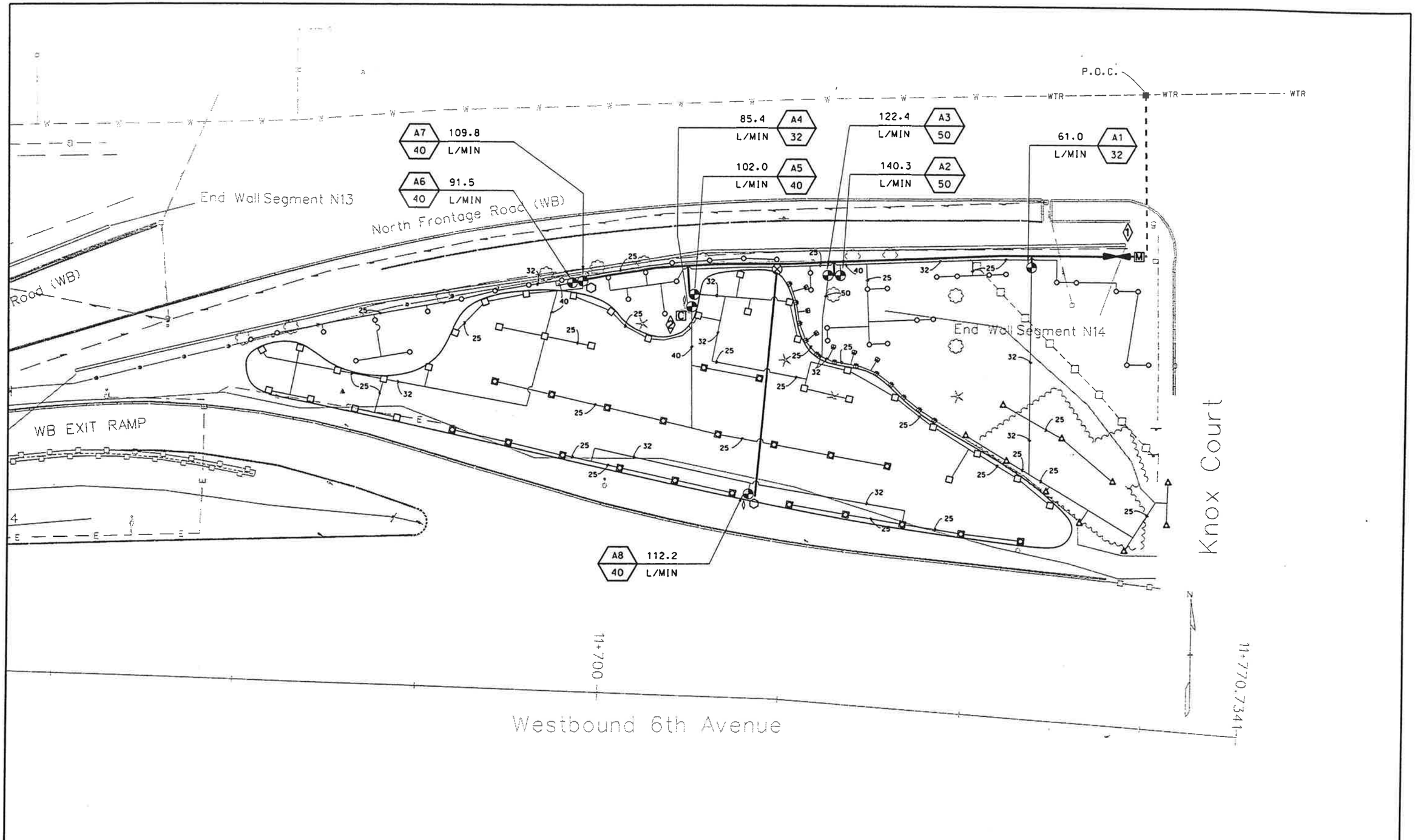
DE LEUW, CATHER



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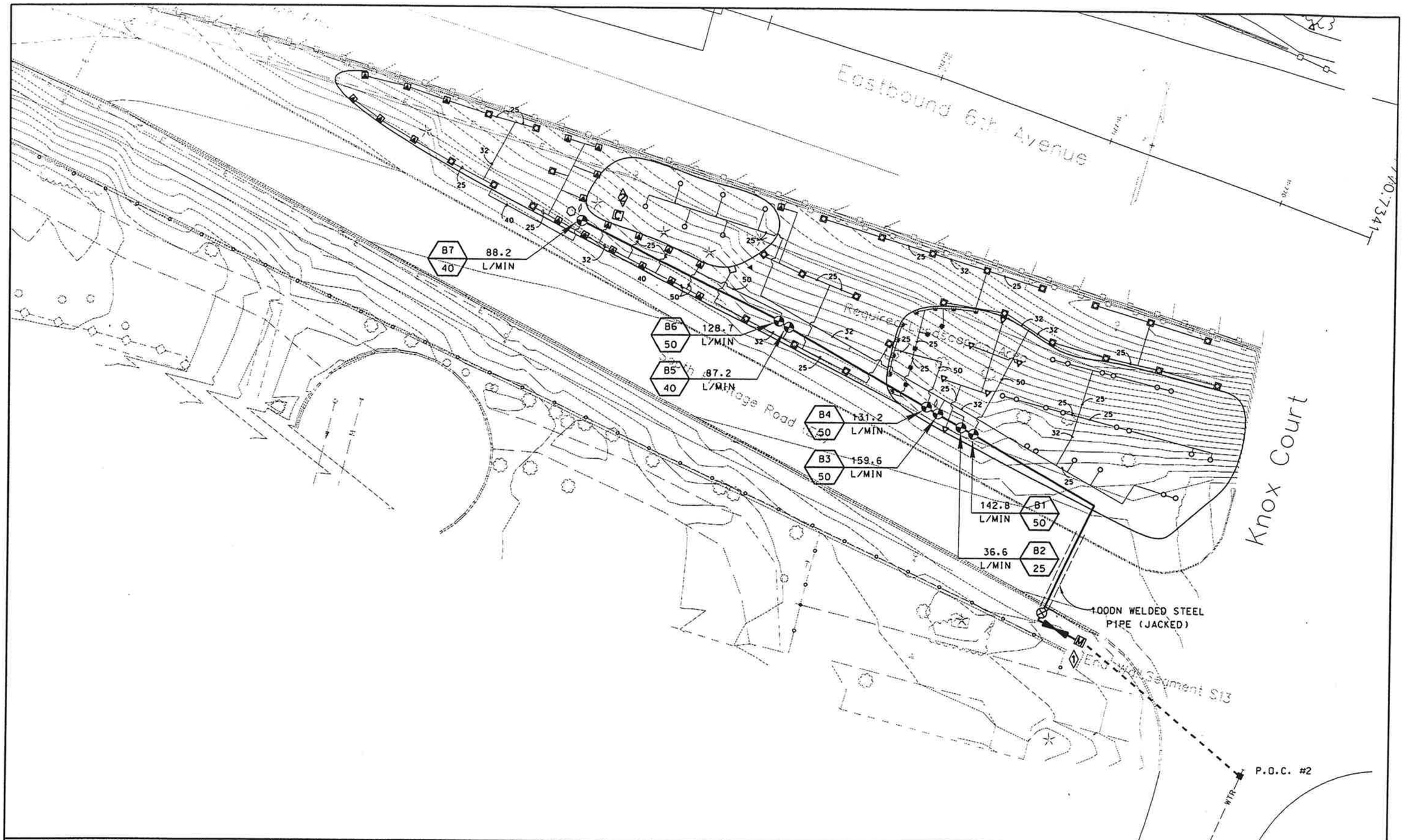
DE LEUW, CATHER



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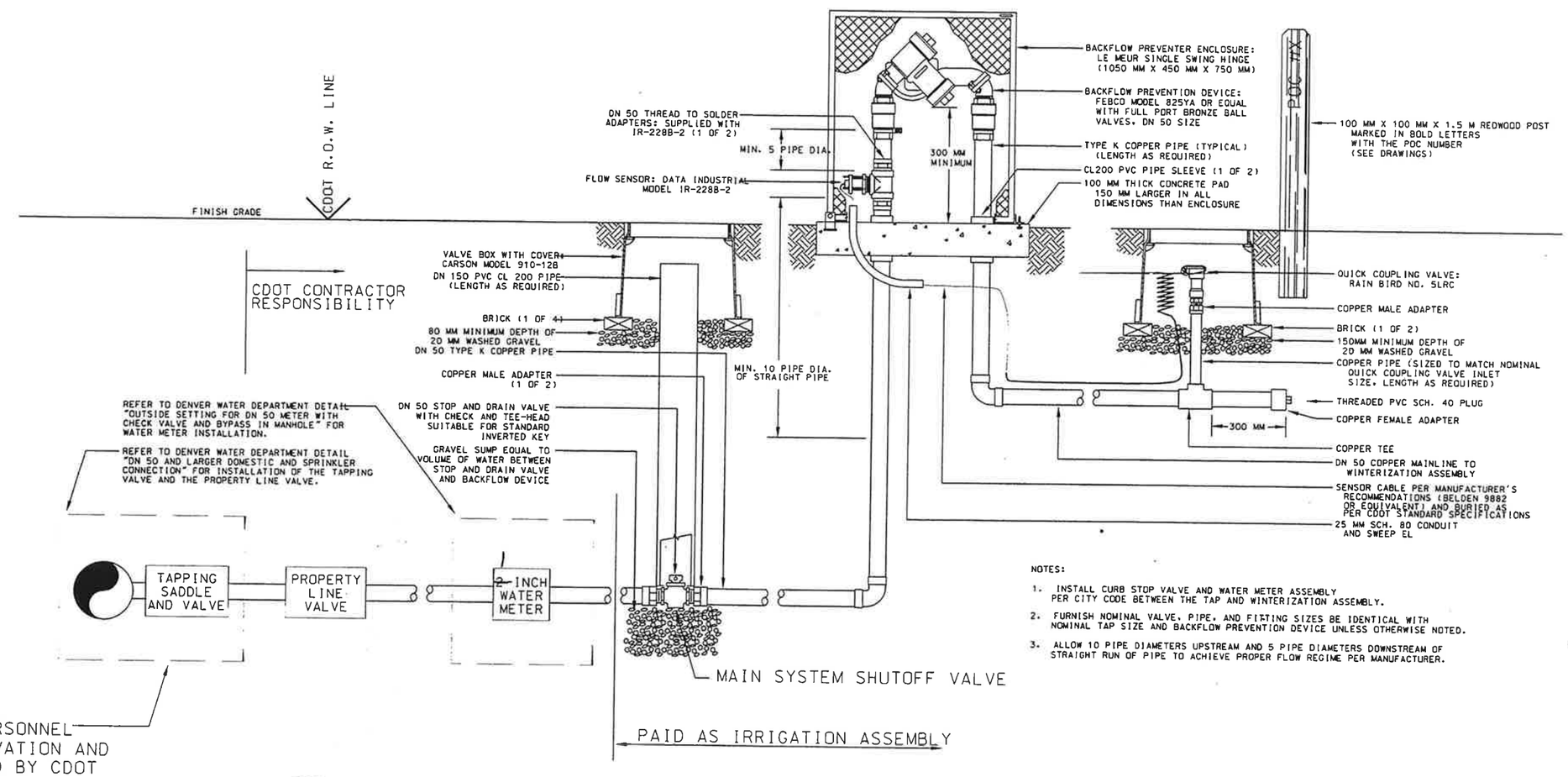
DE LEUW, CATHER

BACKFLOW PREVENTER ENCLOSURE: LE MEUR SINGLE SWING HINGE
BACKFLOW PREVENTION DEVICE: FEBCO MODEL 825YA
TYPE K COPPER PIPE AND FITTINGS
CONCRETE PAD
FEBCO MODEL 825YA OR EQUAL
DATA INDUSTRIAL FLOW SENSOR AND CABLE
DN 50 STOP AND DRAIN VALVE
VALVE BOXES
SCH. 80 CONDUIT AND SWEET ELBOW
MISCELLANEOUS ASSEMBLY ITEMS



NOTES:

1. INSTALL CURB STOP VALVE AND WATER METER ASSEMBLY PER CITY CODE BETWEEN THE TAP AND WINTERIZATION ASSEMBLY.
2. FURNISH NOMINAL VALVE, PIPE, AND FITTING SIZES BE IDENTICAL WITH NOMINAL TAP SIZE AND BACKFLOW PREVENTION DEVICE UNLESS OTHERWISE NOTED.
3. ALLOW 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT RUN OF PIPE TO ACHIEVE PROPER FLOW REGIME PER MANUFACTURER.

1 DWD TAP, VALVE, METER, AND IRRIGATION ASSEMBLY FOR 2-INCH POINTS-OF-CONNECTION (NOT TO SCALE)

Computer File Information		Sheet Revisions			Colorado Department of Transportation	As Constructed	IRRIGATION DETAILS		Project No./Code
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Last Modification Date: 10:30:18 05 JUN 98 Initials: XXX						Revised: 07/15/99	Designer: J.R.L.	Structure Numbers	10739
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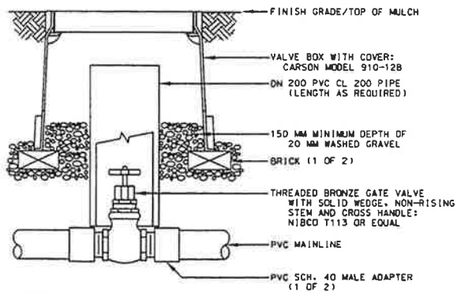
DE LEUW, CATHER

2



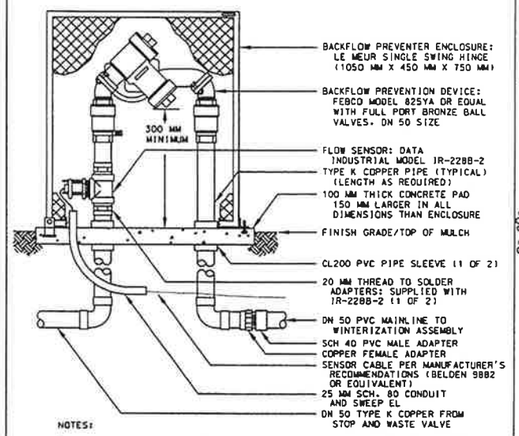
NOTES:

1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.
2. FOR GATE VALVE DN 100 AND LARGER, USE AMERICAN AVK, KENNEDY OR CLOW GATE VALVE WITH MECHANICAL JOINT, FLANGE OR HUB ENDS MEETING REQUIREMENTS OF AWWA C509.
3. INSTALL A 100 MM THICK CONCRETE PAD BELOW VALVE WITH NO. 4 REBAR WHEN USING PUSH ON TYPE VALVES.

NOT TO SCALE

GATE VALVE (ISOLATION) ASSEMBLY	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

3



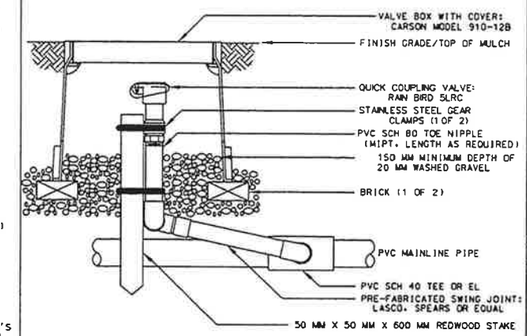
NOTES:

1. FURNISH FITTINGS AND PIPING SIZED IDENTICALLY WITH NOMINAL BACKFLOW PREVENTION DEVICE.
2. ALLOW 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT RUN OF PIPE TO ACHIEVE PROPER FLOW REGIME PER MANUFACTURER.

NOT TO SCALE

BACKFLOW PREVENTION ASSEMBLY, DN 50	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

4



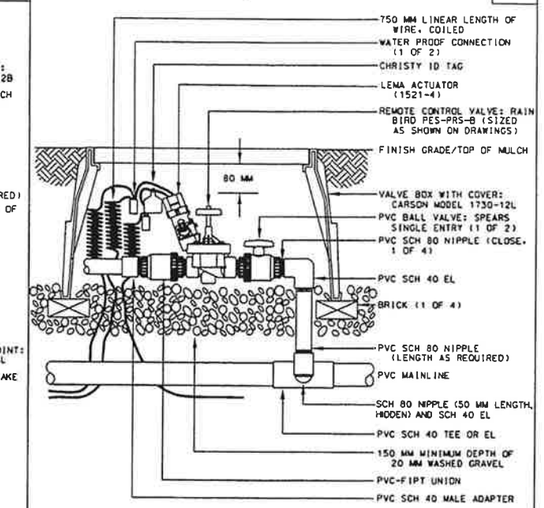
NOTES:

1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

NOT TO SCALE

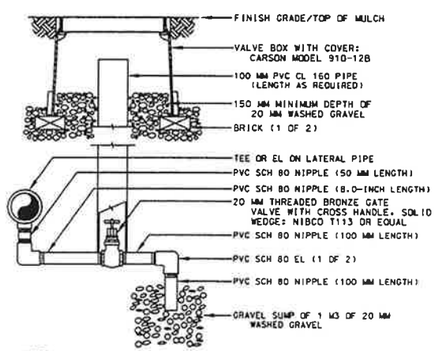
QUICK COUPLING VALVE ASSEMBLY	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

5



AUTOMATIC CONTROL VALVE ASSEMBLY	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

6



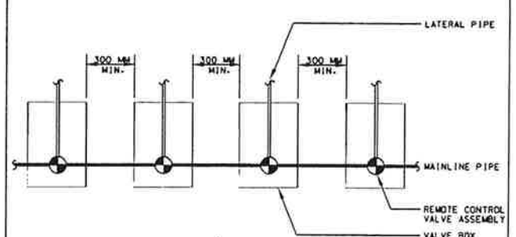
NOTE:

1. SLEEVE TO BE SET SQUARE OVER GATE VALVE TO ALLOW FOR OPERATION OF VALVE WITHOUT BINDING.
2. FURNISH APPROPRIATE KEY TO MATCH GATE VALVE HANDLE.

NOT TO SCALE

MANUAL DRAIN VALVE ASSEMBLY	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

7



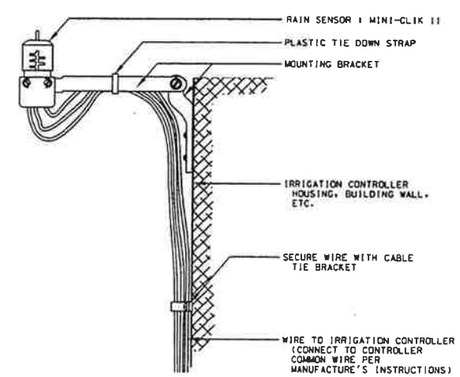
NOTES:

1. ALL VALVE BOXES ARE TO BE GROUPED IN QUANTITIES OF 3 OR 4 AS SHOWN.

NOT TO SCALE

TYPICAL VALVE GROUPING	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

8



NOTE:

1. MOUNT RAIN SENSOR IN SUITABLE LOCATION TO CONTROLLER HOUSING, BUILDING WALL OR MOUNTING POST PER MANUFACTURE'S INSTRUCTIONS.

RAIN SENSOR ASSEMBLY	COLORADO DEPARTMENT OF TRANSPORTATION IRRIGATION DESIGN GUIDELINES

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Last Modification Date:	15:29:50 04 JUN 98 Initials: XXX
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Sheet Revisions		

Colorado Department of Transportation
2000 South Holly Street
Denver, Colorado 80222
Phone: 303-757-9296 FAX: 303-757-9053
Region 6

As Constructed
No Revisions:
Revised: 07/15/99
Void:

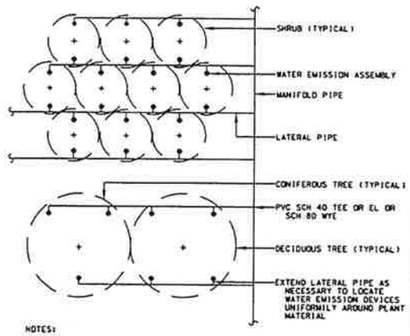
IRRIGATION DETAILS

Designer:	J.R.L.	Structure Numbers	
Detailer:	P.M.N.		
Sheet Subset:		Subset Sheets:	ID-2

Project No./Code
STA 0061-063
10739
Sheet Number 36

DE LEUW, CATHER

9



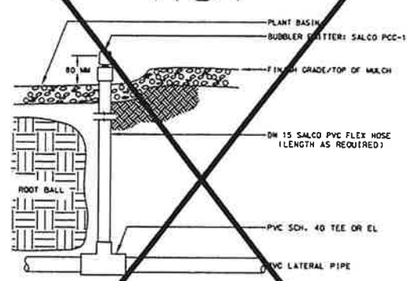
NOTES:

1. LOCATE WATER EMISSION DEVICES UNIFORMILY AROUND THE PLANT MATERIAL.
2. SEE SPECIFICATIONS FOR WATER EMISSION DEVICE SCHEDULE FOR DIFFERENT PLANT MATERIAL.
3. WATER EMISSION ASSEMBLY TO BE LOCATED WITHIN THE BASIN AROUND EACH PLANT.

NOT TO SCALE

DRIP AND BUBBLER PLACEMENT FOR TREES AND SHRUBS

NOT USED

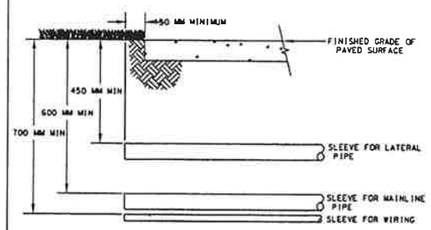


NOT TO SCALE

BUBBLER EMITTER ASSEMBLY

COLORADO DEPARTMENT OF TRANSPORTATION
IRRIGATION DESIGN GUIDELINES

10



NOTE:

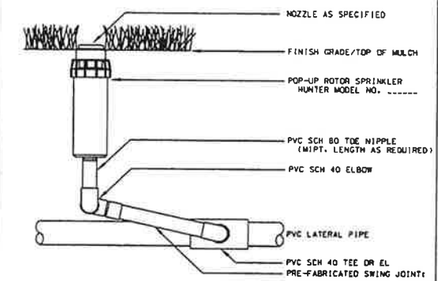
1. INSTALL SLEEVE SO THAT ITS LOWEST ELEVATION OCCURS AT ONE OR BOTH ENDS - NOT ALONG ITS LENGTH.

NOT TO SCALE

TYPICAL SLEEVING INSTALLATION

COLORADO DEPARTMENT OF TRANSPORTATION
IRRIGATION DESIGN GUIDELINES

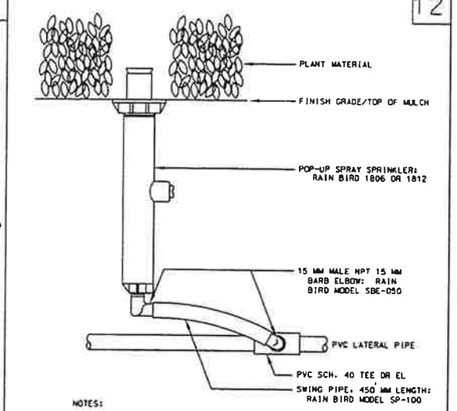
11



NOT TO SCALE

TYPICAL POP-UP ROTOR SPRINKLER ASSEMBLY

12



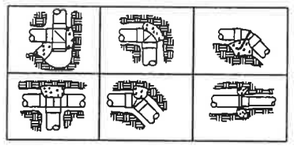
NOTES:

1. IF POLYETHYLENE PIPE IS USED FOR LATERAL PIPE: SUBSTITUTE INSERT TEE OR EL WITH STAINLESS STEEL CLAMPS FOR PVC SLIP TEE OR EL SHOWN ABOVE.

NOT TO SCALE

POP-UP SPRAY SPRINKLER & BUBBLER ASSEMBLY

13



THRUST BLOCK SURFACE AREA AGAINST UNDISTURBED SOIL (SF)

FITTING SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/2° BEND	TEE OR DEAD END
DN 80	1.1	0.6	0.3	0.2	0.8
DN 100	1.9	1.1	0.5	0.3	1.4
DN 150	4.0	2.2	1.1	0.6	2.8
DN 200	5.3	3.0	1.5	0.8	3.8
DN 250	8.3	4.6	2.3	1.2	5.9

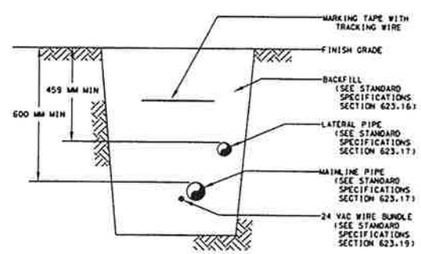
NOTES:

1. INSTALL AND TEST ALL MAINLINE ACCORDING TO MANUFACTURER'S INSTALLATION SPECIFICATIONS.
2. REFER TO SPECIFICATIONS FOR ALL TRENCH DEPTHS AND WIDTHS.
3. USE NO. 4 REBAR WITH MASTIC COATING WHERE PIPE MUST BE ANCHORED TO THRUST BLOCK
4. INSTALL THRUST BLOCK SO THE HORIZONTAL AND VERTICAL DIMENSIONS OF THE THRUST BLOCK ARE APPROXIMATELY EQUAL.

NOT TO SCALE

TYPICAL THRUST BLOCK INSTALLATION

14



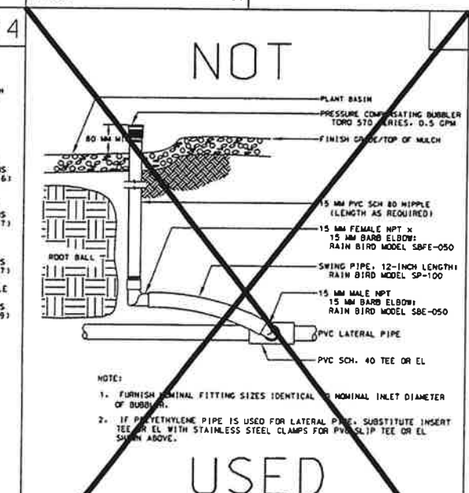
NOTES:

1. SEE CDOT STANDARD SPECIFICATIONS SECTION 623.17 FOR MINIMUM BURIAL DEPTHS FOR ALL PIPE. SEE CDOT STANDARD SPECIFICATIONS SECTION 623.19 FOR MINIMUM BURIAL DEPTHS FOR ALL WIRE.
2. BACKFILL IS NOT PAID AS A PAY ITEM AND SHOULD BE INCLUDED WITH PIPE OR WIRE PAY ITEMS.

NOT TO SCALE

TYPICAL TRENCHING AND PIPE/WIRE INSTALLATION

NOT USED



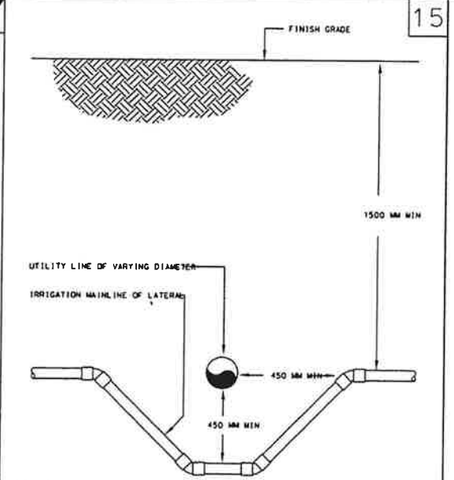
NOTE:

1. FURNISH NOMINAL FITTING SIZES IDENTICAL TO NOMINAL INLET DIAMETER OF BUBBLER.
2. IF POLYETHYLENE PIPE IS USED FOR LATERAL PIPE: SUBSTITUTE INSERT TEE OR EL WITH STAINLESS STEEL CLAMPS FOR PVC SLIP TEE OR EL SHOWN ABOVE.

NOT TO SCALE

IRRIGATION BUBBLER ASSEMBLY

15



NOT TO SCALE

TYPICAL UTITILITY CROSSING

COLORADO DEPARTMENT OF TRANSPORTATION
IRRIGATION DESIGN GUIDELINES

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DE LEUW, CATHER

Sheet Revisions

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DEPARTMENT OF TRANSPORTATION
Region 6
2000 South Holly Street
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Phone: 303-757-9296 FAX: 303-757-9053

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No Revisions:
Revised: 07/15/99
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Detailer: P.M.N.
Structure Numbers
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Subset Sheets: 10-3

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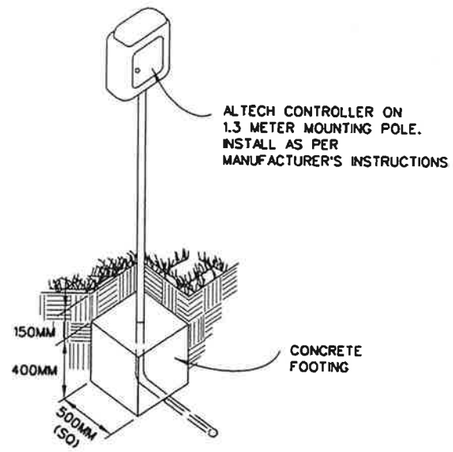
10739
Sheet Number 87



16 SOLAR POWER CONTROLLER
NOT TO SCALE

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Sheet Revisions		

Colorado Department of Transportation
2000 South Holly Street
Denver, Colorado 80222
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Region 6

As Constructed	
No Revisions:	
Revised:	
Void: 07/15/99	

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Designer:	J.R.L.	Structure Numbers	
Detailer:	P.M.N.		
Sheet Subset:		Subset Sheets:	ID-4

Project No./Code
STA 0061-063
10739
Sheet Number 88

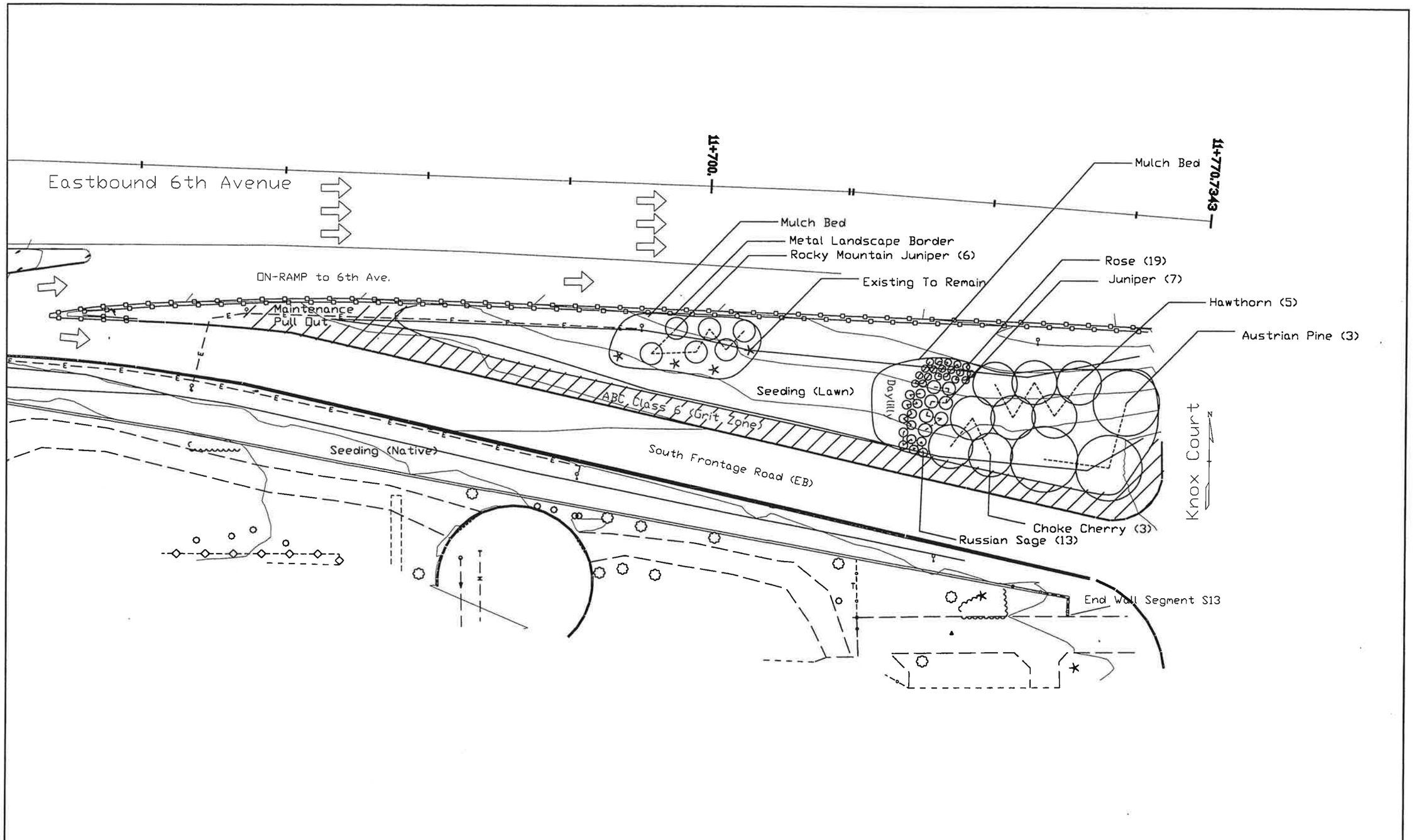
DE LEUW, CATHER

SUMMARY OF LANDSCAPE MATERIAL QUANTITIES

ITEM NO.	DESCRIPTION	UNITS	TOTAL QUAN	North	South
212-00006	SEEDING (NATIVE)	HA	0.5		
212-00011	SEEDING (LAWN)	HA	0.26	0.12	0.14
212-00047	SOIL PREPARATION (SPECIAL)	HA	~~0.46~~ 0.28	~~0.24~~ 0.16	~~0.28~~ 0.13
213-00008	MULCH (WOOD CHIP)	M3	285	171	114
213-00011	MULCH (HYDRAULIC)	HA	0.76	0.12	0.14
213-01000	MULCH (WEED FREE HAY)	HA	~~0.5~~ 0		
213-00440	METAL LANDSCAPE BORDER (3 MM X 100 MM)	M	~~371~~ 389	~~211~~ 192	~~160~~ 197
214-00000	LANDSCAPE MAINTENANCE	LS	1		
214-00220	DECIDUOUS TREE (50 MM CALIPER)	EA	21		
	CHOKE CHERRY (PRUNUS VIRGINIANA 'SHUBERT')	EA	11	8	3
	THORNLESS HAWTHORN (CRATAEGUS CRUS-GALLI 'INERMIS')	EA	10	5	5
214-00508	EVERGREEN TREE (2.4 M)(BALL & BURLAP)	EA	~~18~~ 17		
	AUSTRIAN PINE (PINUS NIGRA)	EA	~~7~~ 6	~~4~~ 3	3
	ROCKY MOUNTAIN JUNIPER (JUNIPERUS SCOPULORUM)	EA	11	5	6
214-00650	EVERGREEN SHRUB (NO.5 CONTAINER)	EA	7		
	BROADMOOR JUNIPER (JUNIPERUS SABINA 'BROADMOOR')	EA	7		7
214-00350	DECIDUOUS SHRUB (NO. 5 CONTAINER)	EA	104		
	CRANBERRY COTONEASTER (COTONEASTER APICULATUS)	EA	15	15	
	RED MEIDELIN ROSE (ROSA X 'SCARLET MEIDILAND')	EA	27	18	9
	RED MEIDELIN ROSE (ROSA X 'MEIDILAND RED')	EA	27	17	10
	RUSSIAN SAGE (PEROVSKIA ATRIPLICIFOLIA)	EA	35	22	13
214-00910	PERNNIALS (NO. 1 CONTAINER)	EA	161		
	ENGLISH IVY (HEDERA HELIX)	EA	6	6	
	ENGLEMAN IVY (PARTHENOCISSUS QUINQUEFOLIA)	EA	5	5	
	DAYLILLY (HEMEROCALLIS 'CAREY QUINN')	EA	50	25	25
	DAYLILLY (HEMEROCALLIS 'RED SELECT')	EA	50	25	25
	DAYLILLY (HEMEROCALLIS 'STELLA DE ORO')	EA	50	25	25
217-00000	HERBICIDE TREATMENT	M2	~~1875~~ 0	~~1125~~ 0	~~750~~ 0
217-00000	ABC CLASS 6	M2	~~8200~~ 833.2	~~440~~ 294.7	~~7760~~ 538.5

NOTES

1. ALL PLANTED AND SEEDED AREAS SHALL RECEIVE SOIL AMMENDMENTS PER PROJECT SPECIAL PROVISION 212. SOIL PREPARATION (SPECIAL).
2. FRESH WOOD CHIP MULCH 150 MM THICK SHALL BE REQUIRED FOR PLANTING BEDS PER PROJECT SPECIAL PROVISION 213 MULCHING (WOODCHIP).
3. PRIOR TO INSTALLATION, ALL PLANT LOCATIONS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEERS REPRESENTATIVE.
4. NO BARE ROOT MATERIAL SHALL BE ACCEPTED.
5. THE CONTRACTOR SHALL BE RESPSONSIBLE FOR REMOVING TREE STAKING AND GUYING PRIOR TO THE END OF THE PLANT ESTABLISHMENT PERIOD.
6. PLANT DAYLILLIES 600 MM ON CENTER.
7. REMOVE ALL ROCKS IN SEEDING (LAWN) AREA OVER THE SIZE OF 75 MM.



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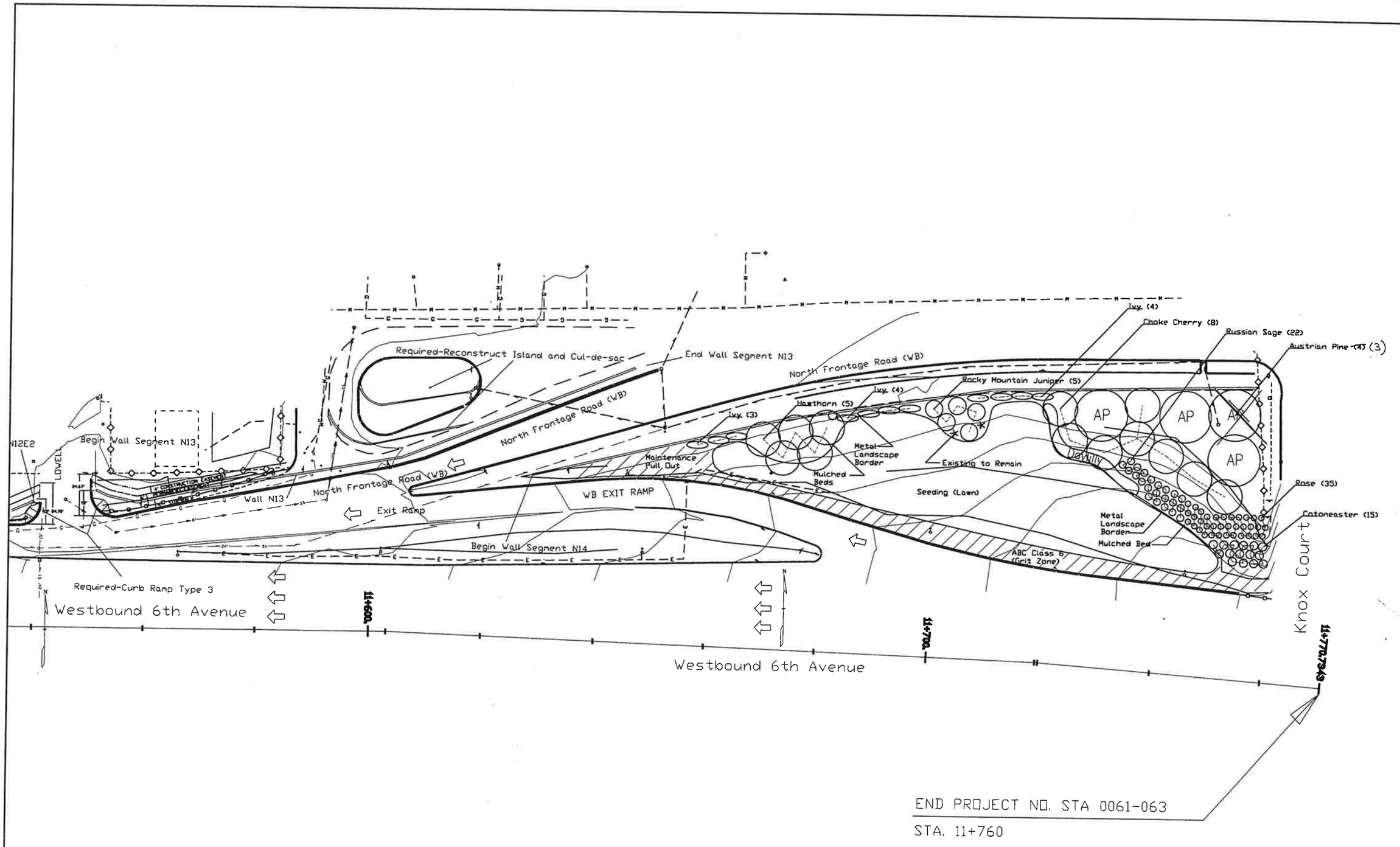
Region 6
JKK

As Constructed
No Revisions: 07/15/99
Revised:
Void:

South 6th Ave Landscaping

Designer:	S. Smith	Structure Numbers	
Detailer:	S. Smith		
Sheet Subset:	L-3	Subset Sheets: 3 of 3	

Project No./Code
STA 0061-063
10739
Sheet Number 20



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North 6th Ave Landscaping

Designer:	S. Smith	Structure Numbers	
Detailer:	S. Smith		
Sheet Subset:	L-2	Subset Sheets:	2 of 3

Project No./Code
STA 0061-063
10739
Sheet Number 21

STORMWATER MANAGEMENT PLAN - ADDITIONAL INFORMATION

Estimated Runoff coefficient
Pre-construction: _____ Post-construction: _____

Existing data describing soil or quality of discharge: _____

Existing vegitation: _____

Proposed sequence for major activities, location of any other potential pollution source, areas used for storage of bldg materials, soils or wastes, and location of any dedicated asphalt or concrete batch plants: see water quality and erosion control specifications, and documents submitted by the contractor at the preconstruction conference.

100-year Flood plain boundaries: see bridge hydraulic information sheet (if existent).

Description of the construction activity, estimate of the total site area and of the area expected to undergo excavation, and name of the receiving water: see CDPS stormwater permit application.

Site map and construction site boundaries: see title sheet.

Areas of cuts and fills and areas of soil disturbance: see plan and profile sheets and roadway cross sections.

Surface waters: see title sheet and bridge hydraulic information sheet (if existent).

Materials handling and spill prevention: see water quality specification (107.25).

Inspection and maintenance: see erosion control specification (107.25 or 208).

Contract Document location of erosion control and stormwater quality managemnt measures not reference above nor included on the Stormwater Management Plan Sheet(s):

It is estimated that 50 Erosion Bales (Weed Free) will be required around drop inlets or as directed.

Washing out of concrete trucks shall be limited to specific sites pre-approved by the Engineer.

Prior to winter shut down, all erodible surfaces shall receive Mulching (Hydraulic) per special provision -213.

It is estimated that 130 m of silt fence will be required.

SEEDING (LAWN):

Soil preparation, fertilizer, seeding and mulching will be required for an estimated .26 hectares of disturbed area within the right-of-way limits which are not surfaced. The following types and rates shall be used:

SEEDING (LAWN) / LBS PLS per HA
Blue Grama - Bouteloua gracilis var. Hachita / 5.5
Buffalograss - Buchole dactyloides var. Sharps / 135

SEEDING (NATIVE):

Soil preparation, fertilizer, seeding and mulching will be required for an estimated 0.5 hectares of disturbed and adjacent areas within the right-of-way limits which are not surfaced. The following types and rates shall be used:

Disturbed surfaces shall be left in a roughened condition at all times during construction.

Prior to winter shutdown, all completed slopes shall be seeded and mulched. Uncompleted slopes shall be mulched with 3.7 m tons of certified weed free forage mechanically crimped in combination with an organic mulch tackafire per project special provision 213.

SEEDING (NATIVE):

Common Name	Botanical name	kgs pls/hectar
BLUE GRAMA	BOUTELOUA GRACILIS v. HACHITA	1.1
WESTERN WHEATGRASS	PASCOPYRUM SMITHII v. ARRIBA	7.8
SIDE OATS GRAMA	BOUTELOUA CURTIPENDULA v. VAUGHN	2
BUFFALO GRASS	BUCHLOE DACTYOIDES v. SHARPES	7.5
PRAIRIE CONE FLOWER	RATIBIDA COLUMNARIS	0.2
GAILARDIA	GAILLARDIA ARISTATA	1.0
BLUE FLAX	LINUM LEWISII	0.5

TOTAL: 20.1 KGS/PLS/HA

Commercial Fertilizer	%	Rate kgs/ha
Available N	18	50
Available P	46	128
Available K	0	0

Seeding Application: Drill seed 6.25 mm to 12.5 mm into soil. In areas not accessable to a drill seeder, broadcast at double the rate and rake 6.25 mm to 12.5 mm into the soil.

Mulching: Apply Mulching (Hydraulic) in accordance to special provision 213-W.C.F.M. and tackifier within Seeding (Lawn) area.

Apply 3.7 m tons certified weed free hay per hectare per Mulching (Weed Free Hay) and mechanically crimp into soil within Seeding (Native) area.

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Stormwater Management Plan			
Designer:	S. Smith	Structure Numbers	
Detailer:	S. Smith		
Sheet Subset:	xxxxx	Subset Sheets: 1 OF 1	

Project No./Code
STA 0061-063
10739
Sheet Number 22 XXX