

**NORTHBOUND 395 IMPROVEMENT PROJECT
PRELIMINARY ENGINEER'S ESTIMATE**

TOTAL QUANTITY	UNIT	DESCRIPTION
10000	HOUR	TRAINING (TRAINEES)
1	LS	CLEARING AND GRUBBING
1	LS	URBAN CLEARING
74	EACH	REMOVE TREES (6-INCHES TO 12-INCHES)
6	EACH	REMOVE TREES (13-INCHES TO 18-INCHES)
1	EACH	REMOVE TREES (19-INCHES TO 24-INCHES)
1	EACH	REMOVE TREES (25-INCHES TO 36-INCHES)
121500	LS	REMOVAL OF PORTION OF BRIDGE
3	EACH	REMOVE FIRE PROTECTION UNIT
10700	LS	REMOVAL OF RETAINING WALL
13	EACH	REMOVAL OF PULL BOX
12	EACH	REMOVAL OF DROP INLET
3	EACH	REMOVAL OF PORTION OF DROP INLET
1	EACH	REMOVAL OF IMPACT ATTENUATOR
7	EACH	REMOVE GUARDRAIL END TREATMENT
617	LINFT	REMOVAL OF EXPANSION JOINTS
24	LINFT	REMOVAL OF MASONRY WALL
190	LINFT	REMOVE CORRUGATED METAL PIPE DOWNDRAIN
4529	LINFT	REMOVAL OF GUARDRAIL
2812	LINFT	REMOVAL OF CONCRETE BARRIER RAIL
111	SQYD	REMOVAL OF CONCRETE PAVEMENT
6190	SQYD	REMOVAL OF BITUMINOUS SURFACE (COLD MILLING)
2550	CUYD	REMOVAL OF COMPOSITE SURFACE
2521	SQYD	REMOVAL OF SLOPE PAVING
102	LINFT	REMOVAL OF STORM DRAIN PIPE
300	LINFT	REMOVAL OF SLOTTED DRAIN
2499	LINFT	REMOVAL OF FENCE
80626	LINFT	REMOVAL OF PAINTED TRAFFIC LINE
62024	CUYD	ROADWAY EXCAVATION
1010	CUYD	DRAINAGE EXCAVATION
74760	CUYD	BORROW EMBANKMENT
5980	CUYD	SELECTED BORROW EMBANKMENT
990	SQYD	BASE PREPARATION
330	SQYD	NON-WOVEN GEOTEXTILE
612	SQYD	GEOGRID
23143	CUYD	STRUCTURE EXCAVATION
6033	CUYD	STRUCTURE EXCAVATION (SPECIAL)
27136	CUYD	GRANULAR BACKFILL
850	CUYD	GRANULAR BACKFILL (SPECIAL)
311	CUYD	SLURRY CEMENT BACKFILL
44	CUYD	DRAIN BACKFILL
3370	CUYD	TOPSOIL
1121	CUYD	TOPSOIL (SALVAGE)
51890	SQYD	HYDRO SEEDING (TYPE B)
5567	SQYD	HYDRO SEEDING
75	CUYD	MULCHING
2233	SQYD	JUTE MATTING
1.32	ACRE	BED AND SLOPE PREPARATION
1	LS	SITE PREPARATION
50	EACH	PLANTS (GROUP A)
208	EACH	PLANTS (GROUP A-1)
576	EACH	PLANTS (GROUP A-5)
36	EACH	PLANTS (GROUP B-1)
157	EACH	PLANTS (GROUP B-5))
327	EACH	PLANTS (GROUP C)
127	EACH	DECORATIVE BOULDER (TYPE A)
84	EACH	DECORATIVE BOULDER (TYPE B)
54	EACH	DECORATIVE BOULDER (TYPE C)
1	LS	PLANT ESTABLISHMENT WORK
602	CUYD	GRANITE MULCH
178	CUYD	VOLCANIC CINDER
403	SQYD	DECORATIVE GRAVEL
3315	SQFT	PAVING STONES
7137	LINFT	HEADER BOARDS (METAL)
542	CUYD	DECORATIVE ROCK (TYPE A)
811	CUYD	DECORATIVE ROCK (TYPE B)
342	CUYD	DECORATIVE ROCK (TYPE C)
582	CUYD	DECORATIVE ROCK (TYPE D)
1	EACH	DECORATIVE FIGURE (TYPE A)
5155	SQYD	AESTHETIC PATTERNING
8767	SQYD	PAINTING
25050	SQFT	DETAIL PAINTING
220	EACH	DRIP EMITTER ASSEMBLY
2105	EACH	DRIP EMITTER
362	EACH	BUBBLE HEAD
23	EACH	CONCRETE VALVE BOX , SINGLE
220	EACH	SPECIAL IRRIGATION BOX
1	EACH	CENTRAL CONTROL SYSTEM
1	EACH	SIXTEEN STATION AUTOMATIC CONTROLLER
1	EACH	FERTILIZER INJECTION SYSTEM (P.O.C.)
1	LS	TEMPORARY MAINTENANCE OF EXISTING IRRIGATION SYSTEM
4210	LINFT	1/2-INCH POLYVINYL CHLORIDE PIPE (FLEXIBLE)
4109	LINFT	3/4-INCH POLYVINYL CHLORIDE PIPE (FLEXIBLE)
3746	LNFT	1/2-INCH POLYVINYL CHLORIDE PIPE
3799	LINFT	1-INCH POLYVINYL CHLORIDE PIPE
1186	LNFT	1 1/2 INCH POLYNINYL CHLORIDE PIPE
325	LINFT	3-INCH POLYVINYL CHLORIDE PIPE
15	EACH	1-INCH TWO-PIECE QUICK COUPLER VALVE
20	EACH	3-INCH GATE VALVE
100	LINFT	IRRIGATION CONTROL CONDUCTOR (12 GAGE)
3	EACH	DRAIN VALVE ASSEMBLY
2	EACH	2-INCH BACKFLOW PREVENTER ASSEMBLY (TYPE A)
23	EACH	1-INCH ELECTRIC CONTROL VALVE
57270	TON	TYPE 1 CLASS B AGGREGATE BASE

180	CUYD	TYPE 2 CLASS B AGGREGATE BASE
810	SQYD	PLANTMIXING MISCELLANEOUS AREAS
22990	TON	PLANTMIX SURFACING (TYPE 2C) (WET)
1480	TON	PLANTMIX OPEN-GRADED SURFACING (3/8-INCH) (WET)
30	TON	EMULSIFIED ASPHALT, TYPE SS-1H (DILUTED)
90	TON	LIQUID ASPHALT, TYPE MC-70NV
1	TON	SAND BLOTTER
210	SQYD	PORTLAND CEMENT CONCRETE PAVEMENT (6-INCHES)
3870	SQYD	PORTLAND CEMENT CONCRETE PAVEMENT (8-INCHES)
44440	SQYD	PORTLAND CEMENT CONCRETE PAVEMENT (13-INCHES)
400	SQYD	PORTLAND CEMENT CONCRETE PAVEMENT (8 1/2-INCHES)
29518	LINFT	SAW AND SEAL TRANSVERSE WEAKENED PLANE JOINTS
42612	LINFT	SAW AND SEAL LONGITUDINAL WEAKENED PLANE JOINTS
1030	GAL	PCCP CURING COMPOUND, WAX BASE
15000	LS	CONCRETE SUPERSTRUCTURE REPAIR
51	EACH	LAMINATED ELASTOMERIC BEARING PAD
17347	FA	REPAIR CONCRETE STRUCTURE
55	CUYD	CLASS AA CONCRETE (MINOR)
39	CUYD	CLASS AA CONCRETE (ISLAND PAVING)
7256	LINFT	CONCRETE BARRIER RAIL (TYPE A)
2059	LINFT	CONCRETE BARRIER RAIL (TYPE B)
128	LINFT	CONCRETE BARRIER RAIL (TYPE D)
363	LINFT	COMPRESSION JOINT SEAL
7853	CUYD	CLASS AA CONCRETE, MODIFIED (MAJOR)
33	CUYD	CLASS DA CONCRETE, MODIFIED (MAJOR)
2127	CUYD	CLASS EA CONCRETE, MODIFIED (MAJOR)
13.1	CUYD	CLASS EA CONCRETE, MODIFIED (MINOR)
21	LINFT	ASPHALT PLUG EXPANSION JOINT
5539	SQYD	GROOVE CONCRETE DECK SLAB
406	GAL	BRIDGE DECK CURING COMPOUND
1.5	CUYD	GROUT
51	LINFT	PREFORMED JOINT FILLER, (1 1/2-INCH)
420	LINFT	PREFORMED JOINT FILLER (2-INCH)
668	LINFT	PREFORMED JOINT FILLER (3-INCH)
105	LINFT	PREFORMED JOINT FILLER (4-INCH)
30000	LS	PRESTRESSING CAST-IN-PLACE CONCRETE
1906	POUND	REINFORCING STEEL (EPOXY COATED)(DOWELED)
1106933	POUND	REINFORCING STEEL
8446	POUND	REINFORCING STEEL (DOWELED)
539077	POUND	REINFORCING STEEL (EPOXY COATED)
3374519	LS	STRUCTURAL STEEL
49	EACH	UTILITY HANGER
74	EACH	APPROACH SLAB RESTRAINER UNIT
52602	POUND	STRUCTURAL STEEL (SPECIAL)
99	LINFT	PEDESTRIAN RAIL, TYPE V
2666	LINFT	PEDESTRIAN RAIL, TYPE X
150	LINFT	DRILLED SHAFT FOUNDATION (72-INCH)
150	LINFT	12-INCH REINFORCED CONCRETE PIPE, CLASS III
648	LINFT	15-INCH REINFORCED CONCRETE PIPE, CLASS III
217	LINFT	18-INCH REINFORCED CONCRETE PIPE, CLASS III
1	EACH	15-INCH PRECAST END SECTION
1	EACH	18-INCH PRECAST END SECTION
142	LINFT	12-INCH CORR. METAL PIPE (16 GAGE)
89	LINFT	18-INCH CORR. METAL PIPE (16 GAGE)
5	EACH	12-INCH METAL END SECTION
2	EACH	18-INCH METAL END SECTION
985	LINFT	12 - INCH HIGH DENSITY POLYETHYLENE PIPE, TYPE S
938	LINFT	15 - INCH HIGH DENSITY POLYETHYLENE PIPE, TYPE S
152	LINFT	18 - INCH HIGH DENSITY POLYETHYLENE PIPE, TYPE S
205	LINFT	24-INCH PERFORATED CORR. METAL PIPE FOR UNDERDRAINS
10	EACH	ANCHOR ASSEMBLY (12-INCH)
2	EACH	ANCHOR ASSEMBLY (18-INCH)
15	EACH	DECK DRAIN
1	EACH	ADJUSTING MANHOLE COVERS (METHOD B)
3	EACH	TYPE 1 MANHOLE (MODIFIED)
2920	POUND	CASTINGS
14990	POUND	STRUCTURAL STEEL GRATES
5	EACH	48-INCH PRECAST REINFORCED CONCRETE MANHOLE, TYPE 1
231	LINFT	TRENCH DRAIN
1990	CUYD	GRAVEL MULCH
12	CUYD	RIPRAP (CLASS 150)
4	CUYD	RIPRAP (CLASS 550)
8	CUYD	RIPRAP BEDDING,(CLASS 150)
1	CUYD	RIPRAP BEDDING,(CLASS 550)
207	CUYD	CLASS AA CONCRETE SLOPE PAVEMENT
2215	SQYD	GRAFFITI RESISTANT COATING
1	EACH	SIDEWALK UNDERDRAIN
23	SQYD	DETECTABLE WARNINGS
168	LINFT	CLASS AA CONCRETE GLUE DOWN CURB (TYPE B)
172	LINFT	CLASS AA CONCRETE CURB (TYPE 3)
2666	LINFT	CLASS AA CONCRETE GUTTER (2-FOOT)
100	LINFT	CLASS AA CONCRETE CURB & GUTTER (SPECIAL)
316	LINFT	CLASS AA CONCRETE CURB & GUTTER (TYPE 1)
1090	LINFT	CLASS AA CONCRETE CURB & GUTTER (TYPE 4)
1273	LINFT	CLASS AA CONCRETE CURB & GUTTER (TYPE 5)
753	LINFT	CLASS AA CONCRETE CURB & GUTTER (TYPE 8)
400	SQYD	CLASS AA CONCRETE SIDEWALK (4-INCH)
50	SQYD	CLASS AA CONCRETE SIDEWALK (6-INCH)
295	LINFT	CLASS AA CONCRETE VALLEY GUTTER (TYPE 1)
2259	LINFT	72-INCH CHAIN LINK FENCE
260	LINFT	72-INCH CHAIN LINK 3B FENCE
9	LINFT	72-INCH CHAIN LINK 3B FENCE (REDWOOD SLATS)
1	EACH	6-FOOT SWING GATE (SINGLE)
5	EACH	12-FOOT SWING GATE (SINGLE)
1013	LINFT	TEMPORARY FENCE
5	EACH	TRAILING END ANCHOR
1	EACH	GUARDRAIL TERMINAL (FLARED)
3	EACH	GUARDRAIL TERMINAL (TANGENTIAL)
4	EACH	GUARDRAIL-BARRIER RAIL CONNECTION (TRIPLE CORRUGATION)
3	EACH	GUARDRAIL-BRIDGE RAIL CONNECTION (TRIPLE CORRUGATION)

2529	LINFT	GALVANIZED GUARDRAIL (TRIPLE CORRUGATION)
269	EACH	GUIDE POSTS (FLEXIBLE)
2	EACH	OBJECT MARKERS (TYPE 2)
3	EACH	MILE MARKERS (POSTS ONLY)
7	EACH	PERPETUATE SURVEY MONUMENTS
3	EACH	NO. 3-1/2 PULL BOX
76	EACH	NO. 5 PULL BOX
48	EACH	NO. 7 PULL BOX
11	EACH	NO. 9 PULL BOX
6	EACH	JUNCTION BOX (A)
7	EACH	JUNCTION BOX (B)
7	EACH	SODIUM VAPOR LUMINAIRE, 250 WATT
1	EACH	SODIUM VAPOR LUMINAIRE, 400 WATT
6	EACH	UNDERPASS LUMINAIRE, 150 WATT (TYPE B)
5	EACH	SPECIAL STEEL POLE
1	EACH	STEEL POLE, TYPE 1A
1	EACH	STEEL POLE, TYPE 1B
1	EACH	STEEL POLE TYPE 7
1	EACH	STEEL POLE, TYPE 35A
2	EACH	TYPE 1A POLE FOUNDATION
2	EACH	SIGNAL POLE FOUNDATION
2	EACH	PEDESTRIAN SIGNAL HEAD 2W
2	EACH	PEDESTRIAN PUSH BUTTON WITH SIGN
11	EACH	SPECIAL DETECTOR INSTALLATION
9	EACH	TRAFFIC ACTUATED CONTROLLER, 170E
1	LS	REMOVAL OF CONDUIT AND CONDUCTORS
64	EACH	REMOVE AND RESET LIGHT POLE
1	EACH	REMOVE AND RESET TRAFFIC ACTUATED CONTROLLER
2	EACH	REMOVE AND RESET PEDESTRIAN SIGNAL HEAD
2	EACH	REMOVE AND RESET PEDESTRIAN PUSH BUTTON WITH SIGN
1	LS	TEMPORARY OVERHEAD LIGHTING SYSTEM
14	EACH	UNDERGROUND ELECTRICAL SERVICE
49374	LINFT	1 1/4-INCH CONDUIT
446	LINFT	1 1/2-INCH CONDUIT
2514	LINFT	2-INCH CONDUIT
396	LINFT	2-INCH CONDUIT (METAL)

17931	LINFT	3-INCH CONDUIT
3846	LINFT	3-INCH CONDUIT (METAL)
34242	LINFT	NO. 2 CONDUCTOR
966	LINFT	NO. 4 CONDUCTOR
17668	LINFT	NO. 6 CONDUCTOR
906	LINFT	NO. 8 CONDUCTOR
1632	LINFT	NO. 10 CONDUCTOR
876	LINFT	15 CONDUCTOR NO. 14 CABLE
630	LINFT	25 CONDUCTOR NO. 14 CABLE
58608	LINFT	SINGLE MODE FIBER OPTIC CABLE (72 FIBER)
1	EACH	SIGNAL ARM, 55-FOOT MAST
1	EACH	SIGNAL HEAD 1W3C, BRACKET
2	EACH	SIGNAL HEAD 1W3C, MAST ARM
38	EACH	LOOP DETECTOR (6-FOOT X 6-FOOT)
4986	LINFT	LEAD-IN CABLE FOR LOOP DETECTORS
30	LINFT	REMOVE AND RELOCATE EXISTING CABLE
1	LS	DYNAMIC MESSAGE SIGN (TYPE 1)
396	LINFT	DIRECTIONAL DRILLING
2	EACH	EXTENSION POLE
10	EACH	INTEGRATED FIBER OPTIC SPLICE/TERMINATION UNIT (UG)
10	EACH	OPTICAL TRANCEIVER/SELF HEALING (OTR/SH)
7	EACH	VIDEO OPTICAL TRANCEIVER (VOTR) PAIR
7	EACH	CCTV FIELD EQUIPMENT (HIGH MAST)
5	EACH	CCTV LOWERING DEVICE (HIGH MAST)
3240	HOURL	FLAGGER
1	FA	UNIFORMED TRAFFIC CONTROL OFFICER
485	DAY	TRAFFIC CONTROL SUPERVISOR
115	EACH	RENT TRAFFIC CONES
36	EACH	RENT CONSTRUCTION BARRICADES (TYPE III B)
4	EACH	RENT CHANGEABLE MESSAGE SIGN
3	EACH	RENT ARROW BOARD (TYPE C)
185	EACH	RENT TRAFFIC DRUMS
4	EACH	RENT TEMPORARY IMPACT ATTENUATOR (45 MPH)
4	EACH	RENT TEMPORARY IMPACT ATTENUATOR (65 MPH)
2	EACH	RENT TRUCK-MOUNTED IMPACT ATTENUATOR
1	EACH	RENT OVERHEIGHT VEHICLE DETECTOR
3199	SQFT	RENT CONSTRUCTION SIGNS
14995	LINFT	RENT PORTABLE PRECAST CONCRETE BARRIER RAIL
145	DAY	RENT CHANGEABLE MESSAGE SIGN
1694	LINFT	RENT WATER FILLED BARRIER
949500	LS	PERMANENT OVERHEAD SIGN SUPPORT STRUCTURES
7	EACH	PERMANENT OVERHEAD SIGN SUPPORT STRUCTURES, REMOVE
850	SQFT	PERMANENT SIGNS (GROUND MOUNTED) (METAL SUPPORTS)
59	SQFT	PERMANENT SIGNS (GROUND MOUNTED) (TIMBER SUPPORTS)
4568	SQFT	PERMANENT SIGN PANELS (OVERHEAD)
3598	SQFT	PERMANENT SIGN PANELS (OVERHEAD)(REMOVE)
333	SQFT	PERMANENT SIGN PANELS (PANELS ONLY)
997	SQFT	PERMANENT SIGNS, REMOVE
212	SQFT	PERMANENT SIGNS, REMOVE (PANEL ONLY)
		MOBILIZATION
475	DAY	TIME RELATED OVERHEAD
23	MILE	EPOXY PAVEMENT STRIPING (8-INCH BROKEN WHITE)
8	MILE	EPOXY PAVEMENT STRIPING (8-INCH SOLID WHITE)
8	MILE	EPOXY PAVEMENT STRIPING (8-INCH SOLID YELLOW)
3	MILE	EPOXY PAVEMENT STRIPING (12-INCH SOLID WHITE)
12074	LINFT	EPOXY PAVEMENT STRIPING (12-INCH DOTTED WHITE)
1675	SQFT	EPOXY PAVEMENT STRIPING (VARIES)
17	EACH	REFLECTIVE PAVEMENT MARKERS (TYPE D)
783	LINFT	PERMANENT PAVEMENT MARKING FILM (TYPE 2) (24-INCH SOLID WHITE)
15	MILE	TEMPORARY PAINTED STRIPING (BROKEN WHITE)
13	MILE	TEMPORARY PAINTED STRIPING (8-INCH SOLID WHITE)
11	MILE	TEMPORARY PAINTED STRIPING (8-INCH SOLID YELLOW)
834	LINFT	TEMPORARY PAINTED STRIPING (SOLID WHITE)
28485	LINFT	TEMPORARY PAINTED STRIPING (12-INCH SOLID WHITE)
204	SQFT	TEMPORARY PAINTED STRIPING (VARIES)
119	LINFT	TEMPORARY PAINTED STRIPING (8-INCH DOTTED WHITE)
11314	LINFT	TEMPORARY PAINTED STRIPING (12-INCH DOTTED WHITE)
241150	LS	TEMPORARY POLLUTION CONTROL
238350	LS	RIVER DIVERSION
2779	LNFT	PRESERVATION FENCING
831	LINFT	8-INCH STEEL PIPE
1	EACH	IMPACT ATTENUATOR (45 MPH)
3	EACH	IMPACT ATTENUATOR (70 MPH)
34	EACH	GROUND ANCHOR
3	EACH	PERFORMANCE TEST
4	EACH	CONNECTION TO EXISTING WATER LINE
209	SQYD	PNEUMATICALLY PACED CONCRETE MORTAR (3-INCHES)
1	FA	PARTNERING - UNIT FA