# CITY OF FALLON SHERMAN STREET AND NORTH BROADWAY STREET REHABILITATION

# **OWNER:**

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# ENGINEER

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SEPTEMBER 2022 *PWP-CH-2022-408 CDBG GRANT #19/PF/04* 



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# **NOTES:**

### GENERAL

- 1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC
- WORKS CONSTRUCTION, LATEST EDITION. 2. THE CONTRACTOR SHALL REFER TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY THE PERMITTING ENTITY, FOR ALL DETAILING NOT
- SHOWN ON THESE PLANS 3. CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND CURRENT NDOT STANDARD PLANS/SPECIFICATIONS (STANDARD SPECIFICATIONS) AND MANUAL ON UNIFORM
- TRAFFIC CONTROL DEVICES (MUTCD). 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION JOB SITE CONFERENCE WITH GOVERNING AGENCIES, ALL UTILITY COMPANIES, OWNER'S REPRESENTATIVES, AND THE PROJECT ENGINEER PRIOR TO COMMENCING WORK. THIS MEETING SHALL BE HELD AT LEAST FORTY-EIGHT (48) HOURS, OR TWO (2) BUSINESS DAYS, PRIOR TO THE START OF CONSTRUCTION AND SHALL COMMUNICATE SCHEDULES, CONTRACTORS MEAN AND METHODS, MATERIALS TO BE USED, AND OTHER RELEVANT MATTERS ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT
- 5. ALL WORK EITHER DIRECTLY OR INDIRECTLY RELATED TO THE PROJECT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY SYSTEM MANAGER.
- 6. THE CONTRACTOR SHALL MAINTAIN AN ONSITE RECORD COPY OF ALL DRAWINGS SPECIFICATIONS, ADDENDA, CHANGE ORDERS, WORK CHANGE DIRECTIVES, FIELD ORDERS, FIELD CHANGES, AND WRITTEN INTERPRETATIONS AND CLARIFICATIONS. RECORDS SHALL BE IN GOOD ORDER AND ANNOTATED TO SHOW CHANGES MADE DURING CONSTRUCTION.
- 7. CONTRACTOR SHALL PROVIDE MATERIALS AND EQUIPMENT SUBMITTALS AND/OR SHOP DRAWINGS TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO ORDERING OR INSTALLATION. A SIGNED SET OF REVIEWED SUBMITTALS MUST ALWAYS BE AVAILABLE ONSITE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 1-800-642-2444 TO PROVIDE FIELD LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION
- THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLAN.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCURE ALL NECESSARY PERMITS LICENSES, INSURANCE POLICIES, ETC. AS MAY BE NECESSARY TO COMPLY WITH LOCAL, COUNTY, STATE, AND FEDERAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK; UNLESS OTHERWISE OBTAINED BY THE OWNER.
- 11. THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, PILOT CAR, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH THE LATEST MUTCD. AT NO TIME WILL OBSTRUCTIONS BE LEFT IN THE ROADWAY DURING NIGHT HOURS. ALL TRAFFIC CONTROL PLANS SHALL BE PREPARED BY ATTSA CERTIFIED PERSONNEL
- 12. THE CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTROL AND THE STANDARD SPECIFICATIONS.
- 13. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618.
- 14. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT. 15. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING
- CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
- 16. TEMPORARY CONSTRUCTION FENCING SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT IN AREAS AS DELINEATED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. THE TEMPORARY FENCING SHALL PREVENT CHILDREN AND PETS FROM ENTERING THE CONSTRUCTION AREA, CREATE A VISUAL BARRIER OF THE CONSTRUCTION ACTIVITIES FROM THE ADJACENT RESIDENCE AND YARDS, AND PROTECT VEGETATION FROM CONSTRUCTION EQUIPMENT.
- 17. THE CONTRACTOR SHALL USE ONLY AUTHORIZED SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AND OBTAIN PROPER APPROVALS FROM THE LAND OWNER AND LOCAL GOVERNING AUTHORITY TO DO SO. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. IN THE EVENT A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL HAVE THE MONUMENT REPLACED, AT HIS OWN EXPENSE, BY A LICENSED SURVEYOR IN THE STATE OF THE PROJECT SITE.
- 19. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 AM AND 5:00 PM UNLESS OTHERWISE DICTATED BY LOCAL ORDINANCE. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE PROJECT ENGINEER TO MODIFY WORK HOURS.
- 20. ALL FIELD CHANGES MUST BE PRE-APPROVED BY THE PROJECT ENGINEER. 21. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
- 22. ALL SALVAGED MATERIALS ARE THE PROPERTY OF THE OWNER AND SHALL BE PALLETIZED ONSITE UNLESS OTHERWISE ARRANGED WITH THE OWNER AND/OR PROJECT ENGINEER.
- 23. THE OWNER IS RESPONSIBLE FOR FURNISHING QUALIFIED SITE INSPECTIONS AS REQUIRED TO COMPLY WITH LOCAL ORDINANCES.
- 24. A GEOTECHNICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT. ALL RECOMMENDATIONS INCLUDED IN THE REPORT ARE HEREBY MADE A PART OF THE CONSTRUCTION DOCUMENTS UNLESS MODIFIED WITHIN THESE PLANS. INSPECTION AND TESTING DURING CONSTRUCTION SHALL BE REQUIRED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN THE REPORT.
  - TITLE: GEOTECHNICAL INVESTIGATION REPORT FOR NORTH BROADWAY STREET AND SHERMAN STREET REHABILITATION DATE: OCTOBER 2021

### UNDERGROUND UTILITIES

- 25. THE CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS NEAR OR WITHIN THE CONSTRUCTION LIMITS WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE NECESSARY RELOCATION OF ANY UTILITY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING WORK.
- 26. NO OTHER UTILITIES MAY BE PLACED IN A WATER OR SEWER TRENCH.
- 27. ALL VALVE BOXES, MANHOLE STRUCTURES, AND CLEAN OUTS SHALL BE MARKED AND ACCESSIBLE AT ALL TIMES.
- 28. CONTRACTOR SHALL SUPPORT TRENCH SIDEWALLS IN ACCORDANCE WITH ALL

APPLICABLE LAWS AND GOVERNING SAFETY REGULATI SHALL CONFORM TO LOCAL REGULATIONS AND OSHAS

- 29. ENDS OF UNFINISHED PIPE SHALL BE SEALED AT THE E
- 30. PIPE SHALL BE LAID IN THE UPHILL DIRECTION, WITH BE 31. THE CONTRACTOR SHALL COORDINATE ALL WATER MAI WITH THE WATER UTILITY A MINIMUM OF FORTY-EIGHT
- **BUSINESS DAYS IN ADVANCE** 32. ALL UNDERGROUND VALVES, TEES, FITTINGS, ETC. LAR COATED TO PROTECT AGAINST CORROSION.
- 33. ALL WATER PROJECT MATERIAL (PIPES, VALVES, LATER SHALL BE LEAD FREE AND MEET THE MINIMUM REQUIRI ADMINISTRATIVE CODE AND NSF/ANSI 61.
- 34. ALL THRUST BLOCKS SHALL BE INSPECTED PRIOR TO B 35. ALL BOLTS AT THRUST BLOCKS AND VALVE SADDLES S VISQUEEN AND TAPED PRIOR TO CONCRETE PLACEME
- 36. THE WATER MAINS SHALL NOT BE PLACED INTO SERVIC a. THE WATER MAIN HAS BEEN DISINFECTED IN ACCOR DEPARTMENT OF ENVIRONMENTAL PROTECTION (NE
- SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION b. THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS WITH NDEP'S BUREAU OF WATER POLLUTION CONTR
- c. ANALYSIS OF THE WATER MAIN WHICH INDICATE THA PRIMARY DRINKING WATER STANDARDS FOR COLIFC COLIFORM BACTERIA) HAVE BEEN OBTAINED AND RE OF SAFE DRINKING WATER. SAMPLING SHALL BE IN A REGULATIONS.
- 37. PVC PIPE SHALL BE TESTED PER AWWA C605 AND DUC TESTED FOR AWWA C600. OTHER MATERIALS SHALL BE IN THE STANDARD SPECIFICATION FOR PUBLIC WORKS 336.
- 38. CONTRACTOR SHALL CONDUCT PIPING TESTS BEFORE AFTER THRUST BLOCKS HAVE HARDENED SUFFICIENTI BEFORE TESTING AND APPLY TEST PRESSURE TO STAB POTABLE WATER.
- 39. CONTRACTOR SHALL PERFORM PLASTIC PIPE BALL AND INSTALLED SEWER PIPE IN ACCORDANCE WITH THE STA PUBLIC WORKS CONSTRUCTION.
- 40. CONTRACTOR SHALL PERFORM AIR PRESSURE TESTING SEWER PIPE IN ACCORDANCE WITH THE STANDARD SP WORKS CONSTRUCTIONS.

### **GRADING, EXCAVATION & SURFACE IMPROVEMENTS**

- 41. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING TAKE-OFF AND SHALL BUDGET THE PROJECT ACCORDIN MATERIALS SHALL BE DISPOSED OF OFFSITE
- 42. ALL EARTHWORK ACTIVITIES SHALL BE IN ACCORDANC GEOTECHNICAL REPORT.
- 43. THE SOILS ENGINEER SHALL APPROVE ALL EARTHWORK COMPACTION REQUIREMENTS ARE MET.
- 44. CONTRACTOR SHALL PROTECT EXISTING PAVING, CON FENCING, MAILBOXES, SIGNS AND ANY OTHER IMPROVE CALLED OUT FOR REPLACEMENT. CONTRACTOR SHALL DAMAGED BY FORCES UNDER THEIR EMPLOY OR CONT
- 45. ALL ASPHALT CONCRETE SURFACES SHALL BE SAWCU INSIDE THE EDGE OF PAVEMENT TO A NEAT, STRAIGHT EXPOSED PAVEMENT TIE-IN EDGES SHALL BE METICULO LOOSE MATERIAL AND THEN TREATED WITH BITUMINOU PAVING. THE EXPOSED BASE MATERIALS SHALL BE GRA PRIOR TO PAVING.

### ENVIRONMENTAL

- 46. ALL CONSTRUCTION SHALL BE PERFORMED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND MAINTAINING A SWPPP
- 47. INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION AND SILTATION FROM ENTERING THE STORM DRAIN SYSTEM, NATURAL DRAINAGE COURSES, AND/OR INTRUDING UPON ADJACENT ROADWAYS AND PROPERTIES. EROSION CONTROL MEASURES SHOWN ON THESE PLANS ARE INTENDED AS A GUIDE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED IN THE FIELD. THIS RESPONSIBILITY SHALL APPLY THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BECOME STABILIZED AND SHALL NOT BE LIMITED TO WET WEATHER PERIODS. THE CONTRACTOR IS RESPONSIBLE FOR SWPPP UPDATES.
- 48. THE CONTRACTOR SHALL MAINTAIN AN ON-GOING DUST CONTROL PROGRAM INCLUDING WATERING OF OPEN AREAS, TO CONFORM WITH THE LATEST FEDERAL STATE, AND COUNTY AIR POLLUTION REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND UPDATING DUST CONTROL PERMITS FOR THE PROJECT.
- 49. ALL AREAS DISTURBED AND LEFT UNDEVELOPED FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE STABILIZED BY THE APPLICATION OF AN APPROVED DUST PALLIATIVE OR HYDROMULCH.
- 50. THE CONTRACTOR SHALL IDENTIFY A STANDBY CREW FOR EMERGENCY WORK AND THEY SHALL BE AVAILABLE AT ALL TIMES. MATERIAL NECESSARY TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS.
- 51. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED
- 52. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES. GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
- 53. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE END OF EACH WORKING DAY.
- 54. ALL DISTURBED AREAS ARE REQUIRED TO HAVE A PALLIATIVE APPLIED FOR DUST
- CONTROL. ALL GRADING SHALL COMPLY WITH STATE AND COUNTY REGULATIONS 55. A SIX-FOOT HIGH PERIMETER FENCE OR A 24-HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN A FACILITY EXCEEDS 18".
- 56. ALL AREAS DISTURBED BECAUSE OF THE WORK SHALL BE REVEGETATED IN
- ACCORDANCE WITH INDUSTRY BEST MANAGEMENT PRACTICES. 57. NO CONSTRUCTION MATERIALS SHALL BE STORED IN A STREAM ENVIRONMENT
- ZONES (SEZ) AT ANY TIME. 58. IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY, PREPARE A DEWATERING PLAN, AND OBTAIN APPROVAL FROM THE PROJECT ENGINEER BEFORE PROCEEDING WITH WORK. DEWATERING ACTIVITIES MAY REQUIRE THE CONTRACTOR TO OBTAIN A DISCHARGE/PUMPING PERMIT FROM THE STATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH PERMITS.
- 59. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS



# **ABBREVIATIONS**

NAP

NIP

NTS

OC

OD

OH

(P)

PG

ΡI

PL

PCC

PIVC

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TF, TOF

SSPWC

R/W, ROW

PP

ONS. SHEETING OR SHORING STANDARDS. ND OF EACH DAY. ELL ENDS UPHILL. IN SHUT DOWNS AND TIE-INS (48) HOURS OR TWO (2) CGER THAN 2" SHALL BE RALS AND APPURTENANCES) EMENTS OF THE NEVADA BACK-FILL. HALL BE COVERED WITH NT. CE UNTIL: DANCE WITH AWWA, NEVADA DEP), THE STANDARD DNS STANDARDS. S MUST BE COORDINATED ROL. AT THE WATER MEETS DRM BACTERIA (ABSENT FOR EPORTED TO NDEP'S BUREAU ACCORDANCE WITH NDEP	AC ACP AGG BC BW BF, BOF BV BV CB CB Cfs CF C&G CF C&G CL CMP COMP CONC CONTR CP CTV DI DIA DWY E EA
E TESTED PER REQUIREMENTS CONSTRUCTION SECTION	EC ELL ELEC
JOINTS ARE COVERED AND .Y. FILL PIPELINE 24 HOURS BILIZE SYSTEM. USE ONLY	ELEV EVC EX, (E) EXT
D MANDREL TEST ON NEWLY ANDARD SPECIFICATIONS FOR	FCA FE FES
G ON NEWLY INSTALLED ECIFICATIONS FOR PUBLIC	FF FFC FG FH FL FLG fps
THEIR OWN QUANTITY NGLY. ALL EXCESS GRADING	FTG G GALV
E WITH THE PROJECT'S	GB GDW
K AND GRADING TO CONFIRM	GD GV
CRETE, LANDSCAPING, EMENTS NOT SPECIFICALLY REPAIR/REPLACE ANYTHING RACT. T THREE FEET MINIMUM LINE AND REMOVED. THE OUSLY CLEANED OF ALL JS EMULSION PRIOR TO ADED AND RECOMPACTED	H HGL HORIZ HP ID IE INT IRR LAT LF LP IT

MAX

MDD

MH

M.I

MMD

MUTCD

TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.

ASPHALT CONCRETE
AGGREGATE
BEGIN CURVE (HORIZONTAL)
BOTTOM OF WALL BOTTOM OF FOOTING
BUTTERFLY VALVE
BEGIN VERTICAL CURVE
CATCH BASIN
CUBIC FEET PER SECOND
CUBIC FEET CURB AND GUTTER
CENTER LINE
CLASS / CENTER LINE
CONCRETE
CONTRACTOR
CONCRETE PAD CABLE TELEVISION
DROP INLET
EAST
ELBOW
ELECTRICAL
EXISTING
EXTERIOR
FLANGE COUPLING ADAPTER FINISH ELEVATION
FLARED END SECTION
FINISH FLOOR
FINISH GRADE
FIRE HYDRANT
FLOW LINE FLANGE
FEET PER SECOND
FOOTING
GALVANIZED
GRAVEL DRIVEWAY GROUND
GATE VALVE
HORIZONTAL
INVERT ELEVATION
INTERSECTION
LINEAR FEET
MAXIMUM
MAXIMUM DRY DENSITY
MANHOLE MINIMUM
MECHANICAL JOINT
MAXIMUM MARSHALL DENSITY
WANUAL FUR TRAFFIC CONTROL DEVICE

NORTH NOT A PART NOT IN PROJECT NOT TO SCALE ON CENTER OUTSIDE DIAMETER OVERHEAD PROPOSED PORTLAND CEMENT CONCRETE PAD GRADE POINT OF INTERSECTION POINT OF INTERSECTION VERTICAL CURVE PROPERTY LINE POINT OF COMPOUND CURVATURE POINT OF TANGENCY POWER POLE POINT OF REVERSE CURVE POINT OF REVERSE VERTICAL CURVE POLYVINYL CHLORIDE PAVEMENT **5 YEAR PEAK FLOW 100 YEAR PEAK FLOW** RADIUS **REINFORCED CONCRETE PIPE** REFERENCE CURB RETURN RADIUS POINT RIGHT **RIGHT-OF-WAY** SLOPE SOUTH STORM DRAIN STORM DRAIN MANHOLE STREET LIGHT SANITARY SEWER SANITARY SEWER CLEAN OUT SANITARY SEWER MANHOLE STANDARD SPEC. FOR PUBLIC WORKS CONSTRUCTION STATION SIDEWALK TELEPHONE TEMPORARY BLOW OFF VALVE TOP OF CURB, TOP OF CONC TO GRADE TOP OF BERM TOP OF FOOTING TOP OF WALL TRAFFIC SIGNAL TRAFFIC CONTROL SIGNAL BOX TOP OF RAIL TRANSITION TYPICAL UNDER GROUND POWER UNLESS NOTED OTHERWISE VELOCITY AT 5 YEAR PEAK VERTICAL CURVE VELOCITY VERTICAL VALLEY GUTTER WEST WATER AND GAS WATER LINE WATER METER WATER SURFACE WATER VALVE WELDED WIRE FABRIC YEAR

# VERTICAL CROSSING CONFLICTS:

- REFERENCE 'GUIDANCE FOR AREAS REQUIRING MITIGATION FOR WATER AND SEWER SEPARATION'. EDITION 1.0 UPDATED JUNE 2018.
- REFERENCE NAC 445A.67165 SEPARATION OF LINES: SEWER MAIN CROSSING WATER MAIN.



Know what's below. Call before you dig

# LEGEND

EXISTING

EXISTING	-	PROPOSED
4174		(4174)
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EX SD AIR AIR		AIR AIR





# PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
700	14845110.890	2572478.823	3960.06	CP CL MON GCP 7
782	14844253.850	2572500.340	3958.74	CP MAG SHNR GCP 10
784	14844196.970	2572784.217	3958.40	CP MAG SHNR GCP 11
785	14844493.640	2572536.280	3959.93	CP RC GCP 9
789	14845116.040	2572803.146	3958.86	CP GCP 8
790	14843555.590	2570666.085	3963.60	CP GCP 5
791	14843556.750	2571006.692	3962.11	CP GCP 6
795	14844044.290	2570688.440	3961.05	CP MAG SHNR GCP 4
796	14844549.710	2570922.557	3959.81	CP RC CGP 3
799	14844964.130	2570939.159	3961.70	CP RC GCP 2
800	14844964.600	2570706.102	3961.44	CP RC GCP 1



THE BASIS OF BEARINGS FOR THIS PROJECT IS NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD83(94) BASED UPON REAL TIME KINEMATIC GPS OBSERVATIONS, OBSERVED OCTOBER 13, 2021 USING A SURVEY GRADE DUAL FREQUENCY GPS RECEIVER WITH TRIMBLE VRS CORRECTIONS FROM CONTINUOUSLY OPERATINGREFERENCE STATION (CORS) FNL1 MODIFIED BY A COMBINED FACTOR OF 1.0001854204, SCALED FROM 0.00N ,0.00E AND CONVERTED TO U.S. SURVEY FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

# **BASIS OF BEARINGS**

# **BASIS OF ELEVATIONS**

DATUM: NAVD 88 PROJECT BENCHMARK = (CORS) FNL1 HAVING AN ELEVATION OF 3977.75'

22x34 SHEETS = HORIZONTAL:1"=60' 11x17 SHEETS = HORIZONTAL:1"=120'





TYPE I CURB AND GUTTER LINE TABLE					
LINE # LENGTH DIRECTION					
L1	25.21	N0° 03' 19.67"W			
L2	7.68	N30° 03' 19.63"W			
L3	54.38	S0° 03' 19.63"E			
L4	3.32	S29° 56' 40.37"W			
L5	5.00	S0° 03' 19.63"E			
L6	3.32	S30° 03' 19.63"E			
L7	127.81	S0° 03' 19.63"E			
L8	3.34	S29° 53' 20.75"W			
L9	12.00	S0° 03' 19.63"E			
L10	3.34	S30° 00' 00.00"E			
L11	116.37	S0° 03' 19.63"E			
L12	17.32	S59° 56' 40.37"W			
L13	6.69	S0° 03' 19.63"E			
L14 111.53 N89° 46' 27.99"E					

TYPE I CURB AND GUTTER LINE TABL
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LINE #	LENGTH	DIRECTION
L57	6.61	N89° 50' 57.59"E
L58	11.57	N0° 03' 19.63"W
L59	16.74	S59° 56' 40.37"W
L60	165.97	N0° 03' 19.63"W
L61	3.32	N29° 56' 43.01"E
L62	5.00	N0° 03' 19.63"W
L63	3.32	N30° 03' 19.63"W
L64	102.23	N0° 03' 19.63"W
L65	3.32	N29° 56' 43.01"E
L66	5.00	N0° 03' 19.63"W
L67	3.32	N30° 03' 19.63"W
L68	74.33	N0° 03' 19.63"W
L69	1.25	N29° 56' 43.01"E
L70	10.33	N0° 03' 19.66"W

1+00

-	TYPE I CURB AND GUTTER CURVE TABLE							
(	CURVE # LENGTH RADIUS DELTA							
	C1	2.62	5.00	30.00				
	C2	2.61	5.00	29.94				
	C3	2.62	5.00	30.00				
	C4	2.62	5.00	30.00				
	C5	2.62	5.00	30.00				
	C6	2.62	5.00	30.00				
	C7	2.61	5.00	29.94				
	C8	2.61	5.00	29.94				
	C9	2.61	5.00	29.94				
	C10	2.61	5.00	29.94				
	C11	5.24	5.00	60.00				
	C12	47.21	20.00	135.24				
	C13	15.73	20.00	45.07				

TYPE I CURB AND GUTTER CURVE TABLE						
CURVE #	DELTA					
C50	15.64	20.00	44.81			
C51	47.03	20.00	134.72			
C52	4.19	2.00	120.00			
C53	2.62	5.00	30.00			
C54	2.62	5.00	30.00			
C55	2.62	5.00	30.00			
C56	2.62	5.00	30.00			
C57	2.62	5.00	30.00			
C58	2.62	5.00	30.00			
C59	2.62	5.00	30.00			
C60	2.62	5.00	30.00			
C61	2.61	5.00	29.96			
C62 2.62 5.00 30.00						







TYPE I CURB AND GUTTER LINE TABLE					
LINE #	LINE # LENGTH DIRECTION				
L15	33.35	S89° 43' 14.09"E			
L16	7.59	N0° 03' 19.63"W			
L17	16.74	S59° 56' 40.37"W			
L18	93.83	N0° 03' 19.63"W			
L19	3.45	N29° 56' 40.37"E			
L20	5.00	N0° 03' 19.63"W			
L21	3.45	N30° 03' 22.27"W			
L22	131.12	N0° 03' 19.63"W			
L23	3.45	N29° 56' 40.37"E			
L24	5.00	N0° 03' 19.63"W			
L25	3.45	N30° 03' 22.27"W			
L26	116.61	N0° 03' 19.63"W			
L27 17.32 N59° 56' 40.37"E					

TYPE I CURB AND GUTTER LINE TABLE		TYPE I CURB AND GUTTER CURVE TABLE				
LINE #	LENGTH	DIRECTION	CURVE #	LENGTH	RADIUS	DELTA
L28	2.65	N0° 03' 19.62"W	C14	14.60	20.00	41.83
L29	19.08	S89° 53' 11.54"W	C15	46.13	20.00	132.17
L46	5.00	N89° 58' 07.53"E	C16	4.19	2.00	120.00
L47	1.06	N0° 03' 19.63"W	C17	2.62	5.00	30.00
L48	15.50	N90° 00' 00.00"W	C18	2.36	4.50	30.00
L49	80.58	N0° 03' 19.63"W	C19	2.36	4.50	30.00
L50	3.45	N29° 56' 43.01"E	C20	2.62	5.00	30.00
L51	5.00	N0° 03' 19.63"W	C21	2.62	5.00	30.00
L52	3.45	N30° 03' 19.63"W	C22	2.36	4.50	30.00
L53	280.21	N0° 03' 19.63"W	C23	2.36	4.50	30.00
L54	17.32	N59° 56' 40.37"E	C24	2.62	5.00	30.00
L55	1.73	N0° 03' 19.63"W	C25	5.24	5.00	60.00
L56	6.32	N89° 54' 38.90"W		•	•	•

TYPE I CURB AND GUTTER CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C26	42.21	20.00	120.93
C27	10.78	20.00	30.88
C40	11.56	20.00	33.12
C41	42.99	20.00	123.15
C42	3.14	2.00	89.94
C43	2.62	5.00	30.00
C44	2.36	4.50	30.00
C45	2.36	4.50	30.00
C46	2.62	5.00	30.00
C47	5.24	5.00	60.00
C48	42.18	20.00	120.84
C49	10.81	20.00	30.98



TYPE I CURB AND GUTTER LINE TABLE			
LINE #	LENGTH	DIRECTION	
L30	33.46	S89° 52' 58.10"W	
L31	28.86	S0° 04' 12.71"E	
L32	18.53	S15° 04' 12.71"E	
L33	99.01	S0° 04' 12.71"E	
L34	2.00	N89° 55' 47.29"E	
L35	2.39	S89° 55' 47.29"W	
L36	164.57	S0° 04' 12.71"E	
L37	10.07	S0° 40' 44.95"E	
L38	9.50	S0° 52' 55.65"E	
L39	164.66	S0° 04' 12.71"E	
L40	2.00	N89° 55' 47.29"E	
L41	2.00	S89° 55' 47.29"W	
L42	99.01	S0° 04' 12.71"E	
L43	18.53	S14° 55' 47.29"W	
L44	28.90	S0° 04' 12.71"E	
L45	5.00	N89° 58' 07.53"E	

TYPE I CURB AND GUTTER CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C28	10.61	20.00	30.40
C29	42.01	20.00	120.35
C30	6.54	25.00	15.00
C31	6.54	25.00	15.00
C32	10.29	15.00	39.30
C33	10.29	15.00	39.30
C34	10.29	15.00	39.30
C35	10.29	15.00	39.30
C36	6.54	25.00	15.00
C37	6.54	25.00	15.00
C38	42.96	20.00	123.08
C39	11.56	20.00	33.12













	NORTH BROADWAY ST	TREET - STA:5+90 TO S	TA:11+30		
				STA = 9+98.00	
-EXISTING GF	ROUND	0.41%	-FINISH GRADE		
(3961.30)	3961.80	(3961.12)	3961.39	(3960.81)	3961.00













JOB NO.:

10514.000









NOTES:

1. PEDESTRIAN RAMP WING SHALL BE 6' MINIMUM LENGTH (UNLESS NOTED ON THIS PLAN) AND NOT EXCEED 8.3%.



ENLARGED VIEW #1











ENLARGED VIEW #2





22x34 SHEETS = HORIZONTAL:1"=20' 11x17 SHEETS = HORIZONTAL:1"=40'









				STA = 9+98.00 FI EV = 360 00	
EXISTING GI	ROUND	0.41%	-FINISH GRADE		
			8" PVC @ 0.19%		
STING 12" R WATER L	434 L.F. 8 INE C900 DR18 WAT	3" AWWA TER LINE			444 L.F. 8" AW C900 DR18 WATER L
				83' LT '.91 - 8" PVC	157.91 - 8" PVC
				STA:9+89.93~1. SSMH #3 RIM:3960.99 I.E. IN= (N) 3957	I.E. OUT= (S) 35
(3961.30)	3961.80	(3961.12)	3961.39	(3960.81)	3961.00

![](_page_15_Figure_10.jpeg)

![](_page_16_Figure_0.jpeg)

- UTILITY NOTES:
- 1. CONTRACTOR TO VERIFY IF ANY EXISTING SEWER LATERALS CONNECT TO THE EXISTING SEWER MAIN. ANY ACTIVE SEWER LATERAL ENCOUNTERED, WILL NEED TO BE REPLACED BEHIND NEW SIDEWALK AND A NEW CLEAN OUT INSTALLED.
- EXISTING WATER SERVICE LINE TO BE REMOVED OR ABANDONED IN PLACE.
- INSTALLED PER DETAIL 6/C8.3
- 4. CONTRACTOR TO TIE NEW SEWER MAIN INTO EXISTING SEWER MAIN WITH FERNCO FITTING OR EQUIVALENT

![](_page_16_Figure_6.jpeg)

![](_page_16_Figure_9.jpeg)

![](_page_17_Figure_0.jpeg)

![](_page_17_Figure_1.jpeg)

![](_page_18_Figure_0.jpeg)

**ENLARGED VIEW #1** 

### SHEET NOTES:

1. INFILTRATION CHAMBERS MAY BE FIELD FIT BY THE CONTRACTOR. ORIENTATION CAN BE ADJUSTED BASED UPON EXISTING UTILITIES. ELEVATIONS MAY BE ADJUSTED PER LOCATION OF SAND LAYER OR INFILTRATION.

![](_page_18_Figure_4.jpeg)

![](_page_18_Figure_6.jpeg)

![](_page_18_Figure_7.jpeg)

RHH

RHH

AJG

![](_page_18_Figure_8.jpeg)

![](_page_18_Figure_9.jpeg)

![](_page_18_Figure_10.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_19_Figure_1.jpeg)

![](_page_20_Figure_0.jpeg)

TYPE I CURB AND GUTTER LINE TABLE
-----------------------------------

LINE #	LENGTH	DIRECTION
L1	175.38	N0° 15' 21.00"E
L4	56.37	S0° 15' 21.00"W
L13	263.55	N0° 15' 21.00"E

### TYPE I CURB AND GUTTER CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C1	26.86	25.00	61.57
C2	26.74	25.00	61.27
C7	40.67	25.00	93.20
C8	39.22	25.00	89.88

SURFACE IMPROVEMENT LEGEND

ROADWAY RECONSTRUCTION CURB & GUTTER

> PCC SIDEWALK PCC DRIVEWAY APRON

AGGREGATE BASE

![](_page_20_Picture_11.jpeg)

![](_page_20_Picture_12.jpeg)

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![](_page_20_Figure_14.jpeg)

![](_page_20_Figure_15.jpeg)

![](_page_21_Figure_0.jpeg)

TYPE I CURB AND GUTTER LINE TABLE	

LINE #	LENGTH	DIRECTION
L5	36.31	S12° 21' 15.51"W
L6	59.50	S0° 59' 25.77"W
L7	48.09	S2° 23' 24.81"W
L8	47.98	S0° 24' 08.52"E
L9	60.17	S0° 59' 25.77"W
L10	36.31	S12° 21' 15.51"W

TYPE I CURB AND GUTTER CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C3	110.22	522.00	12.10
C4	94.80	478.00	11.36
C5	103.53	522.00	11.36
C6	75.24	478.00	9.02

### SURFACE IMPROVEMENT LEGEND

ROADWAY RECONSTRUCTION	
CURB & GUTTER	4 •
PCC SIDEWALK	
PCC DRIVEWAY APRON	

![](_page_21_Picture_8.jpeg)

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_2.jpeg)

# SHERMAN STREET - STA:2+00 TO STA:6+50

	<u>45.00</u> <u>958.3</u> 9				
	STA = 4+4 ELEV = 3		FINISH GRADE		
				0.40%	
(3958.53)	3958.57	(3958.05)	3958.61	(3958.26)	3959.01
4+	00	5+	00	6+	00

NOTES:

- 1. PROPOSED ROADWAY CROWN VARIES SLIGHTLY FROM EXISTING GRADE. ON OCCASION, ADDITIONAL PULVERIZATION IN EXCESS OF 10" RECONSTRUCTION SECTION WILL BE REQUIRED. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE REMOVAL OF EXISTING MATERIALS NECESSARY TO ACHIEVE ELEVATIONS AND GRADES NOTED ON THE IMPROVEMENT PLANS.
- POTENTIAL SHALLOW UTILITIES AND SERVICES MAY BE ENCOUNTERED WITHIN THE ROADWAY SEATION. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATION AND DEPTH AND NOTIFY THE ENGINEER ON ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH ROADWAY PULVERIZATION ACTIVITIES.
- ADJUST EXISTING MANHOLE RIM ELEVATIONS TO MATCH FINISH GRADE.
- CONTRACTOR TO COORDINATE WITH CITY OF FALLON PRIOR TO CONSTRUCTION TO DETERMINE WATER METERS AND SETTERS TO BE ADJUSTED.
- THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS POSSIBLE WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING OF CONSTRUCTION.

SEE 'ENLARGED VIEW #2' ON SHEET C6.2

6

![](_page_22_Figure_13.jpeg)

![](_page_22_Picture_14.jpeg)

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![](_page_22_Figure_18.jpeg)

JOB NO.:

10514.000

![](_page_23_Figure_0.jpeg)

![](_page_23_Figure_2.jpeg)

GRADING NOTES:

- 1. PROPOSED ROADWAY CROWN VARIES SLIGHTLY FROM EXISTING GRADE. ON OCCASION, ADDITIONAL PULVERIZATION IN EXCESS OF 10" RECONSTRUCTION SECTION WILL BE REQUIRED. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE REMOVAL OF EXISTING MATERIALS NECESSARY TO ACHIEVE ELEVATIONS AND GRADES NOTED ON THE IMPROVEMENT PLANS.
- 2. POTENTIAL SHALLOW UTILITIES AND SERVICES MAY BE ENCOUNTERED WITHIN THE ROADWAY SEATION. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATION AND DEPTH AND NOTIFY THE ENGINEER ON ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH ROADWAY PULVERIZATION ACTIVITIES.
- 3. ADJUST EXISTING MANHOLE RIM ELEVATIONS TO MATCH FINISH GRADE.
- 4. CONTRACTOR TO COORDINATE WITH CITY OF FALLON PRIOR TO CONSTRUCTION TO DETERMINE WATER METERS AND SETTERS TO BE ADJUSTED.
- 5. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS POSSIBLE WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING OF CONSTRUCTION.

![](_page_23_Picture_10.jpeg)

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![](_page_23_Figure_14.jpeg)

BAR IS 1 INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CHECKED BY:

JOB NO.:

![](_page_23_Picture_17.jpeg)

AJG

10514.000

![](_page_24_Figure_0.jpeg)

![](_page_24_Picture_3.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_1.jpeg)

## SHERMAN STREET - STA:2+00 TO STA:6+50

	45.00 958.39				
	STA = 4+4 ELEV = 3		FINISH GRADE		
				0.40%	
			<u></u> <u>_</u>		
2" WATER MAIN				0	EXISTING 12" W
·					
SS			EXISTING 12" PVC SS		
		62' LT .35 - 12" PVC 9.45 - 8" PVC 349.35 - 12" PVC	.99' RT EE .96' RT EE	39' LT 39' LT 9.21 - 12" PVC 9.21 - 8" PVC 349.14 - 12" PVC	.96' RT O EXISTING 12" /ITH 8" GATE VALVE
		STA:4+82.09, 9. SSMH #6 RIM:3958.04 I.E. IN= (N) 394 I.E. OUT= (N) 39	STA:4+97.18, 11 EXISTING 12" TI STA:5+04.79, 11 EXISTING 12" TI	STA:5+77.73, 9. SSMH #3546 RIM:3958.06 I.E. IN= (S) 3949 I.E. IN= (E) 3949 I.E. OUT= (N) 36	STA:5+04.79, 11 8" HOT TAP INT WATER MAIN M
(3958.53)	3958.57	(3958.05)	3958.61	(3958.26)	, 3959.01
4+	.00	5+	00	6.	+00

![](_page_25_Figure_7.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_26_Figure_2.jpeg)

![](_page_26_Figure_4.jpeg)

![](_page_27_Figure_0.jpeg)

### SHEET NOTES:

1. INFILTRATION CHAMBERS MAY BE FIELD FIT BY THE CONTRACTOR. ORIENTATION CAN BE ADJUSTED BASED UPON EXISTING UTILITIES. ELEVATIONS MAY BE ADJUSTED PER LOCATION OF SAND LAYER OR INFILTRATION.

![](_page_27_Figure_3.jpeg)

ENLARGED VIEW #2

![](_page_27_Picture_6.jpeg)

![](_page_28_Figure_0.jpeg)

NOTES:

N.T.S.

![](_page_28_Figure_3.jpeg)

N.T.S.

![](_page_28_Figure_5.jpeg)

### NOTES:

- 1. THE CONTRACTOR SHALL PULVERIZE THE EXISTING ASPHALT CONCRETE AND BASE AND REUSE THIS MATERIAL AS BASE AND/OR STRUCTURAL FILL/TRENCH BACKFILL. THE PULVERIZED ASPHALT CONCRETE SHALL MEET THE REQUIREMENTS OF TYPE 1 RECYCLED AGGREGATE BASE IN THE STANDARD SPECIFICATIONS IF TO BE REUSED AS BASE MATERIAL. THE PULVERIZED AGGREGATE BASE MATERIAL SHALL BE MOISTURE CONDITIONED TO WITHIN 2% OF OPTIMUM AND COMPACTED TO A MINIMUM OF 95% RELATIVE TO ASTM D1557. PRIOR TO PLACEMENT OF ASPHALT, THE CONTRACTOR SHALL PROOF ROLL THE RECYCLED AGGREGATE BASE UTILIZING A LOADER WITH A FULL BUCKET, OR A FULLY LOADED 10 WHEEL WATER TRUCK.
- 2. IF UNSUITABLE MATERIAL IS ENCOUNTERED, CONTRACTOR TO NOTIFY DESIGN ENGINEER FOR APPROPRIATE REMEDIATION.

NOTES:

1. ALL P.C.C. CURB AND GUTTER SHALL BE FIBER-REINFORCED AND MEET 4,000 PSI MIN. @ 28 DAYS. 2. ALL CONCRETE CURB AND GUTTER SHALL HAVE  $\frac{1}{2}$ " EXPANSION JOINTS EVERY 30' (UNLESS APPROVED OTHERWISE BY THE ENGINEER) AND AT ALL CURB RETURNS AND SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET. 3. AGGREGATE BASE MATERIAL SHALL CONFORM TO THE SPECIFICATIONS FOR TYPE 2 CLASS B AGGREGATE BASE AND BE COMPACTED TO 95% M.D.D..

![](_page_28_Picture_15.jpeg)

![](_page_28_Picture_16.jpeg)

1. IF SAWCUT IS WITHIN 24" OF EDGE OF AC PAVEMENT, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION

# AC PAVING PATCH

![](_page_28_Figure_21.jpeg)

# N.T.S.

NOTES:

![](_page_28_Figure_23.jpeg)

![](_page_28_Figure_24.jpeg)

### NOTES:

- LOCATION OF SOLDIER COURSE

# P.C.C. SIDEWALK

# TYPE I P.C.C. CURB AND GUTTER

(2)

![](_page_28_Picture_34.jpeg)

5. SOLDIER COURSE CONCRETE SHALL BE THE INTEGRAL COLORED WITH 'CORAL RED'. REFERENCE PLANS FOR

![](_page_28_Figure_36.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_29_Picture_7.jpeg)

![](_page_29_Picture_19.jpeg)

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**C8.1** DRAWN BY: RHH DESIGNED BY: RHH CHECKED BY: AJG JOB NO.: 10514.000

![](_page_30_Figure_0.jpeg)

2. PRECAST BASE MAY BE USED IF APPROVED BY GOVERNING AGENCY. 3. SANITARY SEWER MANHOLES SHALL BE POLYMER COATED.

### **TYPE I-A MANHOLE - POLYMER**

N.T.S.

N.T.S.

![](_page_30_Figure_4.jpeg)

1. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE "STANDARD SPECIFICATIONS". 2. CONCRETE SHALL BE 4,000 PSI @ 28 DAYS.

3. REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST ONE INCH CLEAR UNLESS OTHERWISE NOTED.

4. ALL MANHOLES SHALL INCLUDE PINKERTON #A-107 FRAME AND COVER ASSEMBLY, OR EQUAL, WITH IDENTIFICATION OF STORM DRAIN OR SEWER CLEARLY DISPLAYED ON THE COVER. 5. EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305.00 OF THE "STANDARD SPECIFICATIONS".

6. EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE. (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE). IN EXISTING STREET SECTIONS, ALLEY SECTIONS AND CONFINED AREAS SUCH AS LIMITED EASEMENTS OR ADJACENT TO STRUCTURES. NATURAL ANGLE OF REPOSE WILL BE ALLOWED IN ALL OTHER AREAS. 7. STEPS ("MA" MANHOLE STEP BY MA INDUSTRIES OR EQUIVALENT) WILL BE REQUIRED IN ALL MANHOLES 5 FEET OR MORE IN

8. PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS

9. MANHOLE DESIGN FOR PIPE LARGER THAT 60" SHALL BE SUBMITTED TO THE GOVERNING AGENCY FOR APPROVAL 10. MANHOLE DESIGN FOR DEPTHS EXCEEDING 18 FEET SHALL BE SUBMITTED TO THE GOVERNING AGENCY FOR APPROVAL. 11. TYPE AND SIZE OF MANHOLE TO BE CONSTRUCTED IN A PARTICULAR LOCATION SHALL BE DETERMINED BY THE PIPE SIZE, ALIGNMENT AND GRADE AS FOLLOWS:

48" SIZE

A. ALL CASES FOR PIPE 18" AND SMALLER. B. 24" AND SMALLER PIPE ON TANGENT LINE AND GRADE.

60" SIZE

A. 27" THROUGH 36" PIPE ON TANGENT LINE AND GRADE. B. 21" THROUGH 27" PIPE AT ANGLE POINTS AND CHANGES IN GRADE OR PIPE SIZE.

TYPE I-A USED IN PLACE OF TYPE I AS AUTHORIZED BY THE GOVERNING AGENCY.

TYPE I-B USED IN PLACE OF TYPE I ONLY AS AUTHORIZED BY THE AGENCY WHEN COVER ABOVE CONDUIT IS LIMITED. TYPE II

48" SIZE 30" THROUGH 60" PIPE ON TANGENT LINE WITH A CHANGE IN GRADE OR PIPE SIZE.

TYPE III USED IN PLACE OF TYPE I WHEN 2' OR MORE DROP IS DESIRED IN SEWER MAIN.

TYPE IV TANGENT

### 60" SIZE

A. 39" THROUGH 60" PIPE ON TANGENT LINE AND GRADE WITH NO CHANGE IN PIPE SIZE. ANGLE POINT

60" SIZE A. 30" THROUGH 60" PIPE AT ANGLE POINT IN LINE. 12. MANHOLE MINIMUM WALL THICKNESS SHALL BE 5" WHEN STEPS ARE REQUIRED;

# MANHOLE GENERAL NOTES

![](_page_30_Figure_28.jpeg)

STORM DRAIN/SANITARY SEWER

![](_page_30_Figure_30.jpeg)

2

5

# N.T.S.

![](_page_30_Figure_38.jpeg)

# **TYPICAL SEWER/STORM TRENCH DETAIL**

![](_page_30_Figure_44.jpeg)

![](_page_31_Figure_0.jpeg)

# #200 DROP INLET

N.T.S.

TYPE OF FITTING	90° BEND	45° BEND	11 <b>¼</b> " OR 22 <b>½</b> " BEND	TEE OR DEAD END	TEE W/PLUG	CROSS W/PLUG
TYPICAL INSTALLATION						

### THRUST BLOCK BEARING AREA (sq. ft.)

	TYPE OF FITTING		90° BEND	45° BEND	11 <b>¼</b> " OR 22 <b>½</b> " BEND	TEE OR DEAD END	TEE W/PLUG	CROSS W/PLUG
ſ		4"	2	1	1	2	2	2
		6"	4	4	2	4	4	4
		8"	7	4	2	5	7	7
	ЫП	10"	12	6	3	8	12	12
	с Ц	12"	16	10	5	12	16	16
	о Ц	14"	20	12	6	14	20	20
	SIZ	16"	27	15	8	18	27	27
		18"	45	25	13	32	45	45
		24"	65	35	18	46	65	65

### NOTES:

- 1. THRUST BLOCKS ARE TO BE CONSTRUCTED OF CLASS 'C' CONCRETE.
- 2. AREAS GIVEN ARE FOR CLASS 150 PIPE AT TEST PRESSURE OF 150 P.S.I., WITH 2000 P.S.F. BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND/OR SOIL TYPES ADJUST AREAS
- ACCORDINGLY, SUBJECT TO APPROVAL OF THE ENGINEER.
- 3. THRUST BLOCKS ARE TO BE POURED AGAINST UNDISTURBED SOIL. 4. JOINTS AND FACE OF PLUGS ARE TO BE KEPT CLEAR OF CONCRETE.

# THRUST BLOCK BEARING AREAS

![](_page_31_Picture_14.jpeg)

VAL	VE
1.	FULI
	WAT
2.	"O"-F
3.	WED
4.	FULI
	COA
	- · ·

- NUTS

![](_page_31_Picture_20.jpeg)

![](_page_31_Picture_22.jpeg)

![](_page_31_Figure_24.jpeg)

**TOP VIEW-BOX** WITH CAST IRON REMOVED

![](_page_31_Figure_26.jpeg)

CAST IRON HOOD, FRAME, AND GRATE SHOWN

![](_page_31_Figure_28.jpeg)

![](_page_31_Figure_29.jpeg)

UP TO 6'-0" INSIDE DEPTH														
DROP INLET														
MODEL NO.	А	В	WEIGHT											
DI243636-4R	36"	42"	3080 LBS.											
DI243648-4R	48"	54"	3940 LBS.											
DI243660-4R	60"	66"	5660 LBS.											
DI243672-4R	72"	78"	6510 LBS.											

2

![](_page_31_Figure_31.jpeg)

![](_page_31_Figure_33.jpeg)

![](_page_31_Figure_34.jpeg)

### NOTES:

1. SEE DETAIL FOR THRUST BLOCK SIZE, (MATERIAL USED FOR THRUST BLOCKING SHOULD NOT PREVENT ACCESS TO BOLT ASSEMBLY)

![](_page_31_Figure_37.jpeg)

### NOTES:

- SITUATION, A SPECIAL FITTING WILL BE SPECIFIED.

![](_page_31_Picture_42.jpeg)

![](_page_31_Picture_43.jpeg)

![](_page_31_Picture_44.jpeg)

IF PAVEMENT WIDTH REMAINING BETWEEN THE

WATER LINE

1. CORPORATION STOP, CURB STOP, GATE VALVE 4" OR LARGER AND SERVICE LINE TO BE THE SAME SIZE. 2. SERVICE STRAPS SHALL BE SINGLE STRAP FOR UP TO 1" SERVICES AND BE A DOUBLE STRAP FOR LARGER SIZES, EXCEPT WHERE SIZE OF TAP EXCEEDS MANUFACTURER'S RECOMMENDED LIMIT FOR SIZE OF MAIN. FOR THIS

3. SERVICE LINE SHALL BE POLYETHYLENE TUBING (CTS) THAT CONFORM TO AWWA STANDARD C901-17 'POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, 3/4" TO 3" FOR WATER SERVICE' AND ASTM D2737 'STANDARD SPECIFICATIONS FOR POLYETHYLENE (PE) PLASTIC TUBING. MINIMUM TEST PRESSURE SHALL BE 160 P.S.I.

![](_page_31_Figure_50.jpeg)

DRAWN BY: DESIGNED BY: CHECKED BY:

JOB NO.:

6

RHH RHH AJG 10514.000

![](_page_32_Figure_0.jpeg)

- FOR A <sup>3</sup>/<sub>4</sub>" SINGLE METER USE A 'MUELLER' LID MODEL #780112 1.
- FOR A 1" SINGLE METER USE A 'MUELLER' LID MODEL #780113 2.
- 3. FOR A DOUBLE METER USE A 'MUELLER' LID MODEL #780111 DOUBLE METER SET SHALL HAVE A 1" SERVICE 4.
- SERVICE LINE SIZE AS DIRECTED BY CCPW ( $\frac{3}{4}$ " 1") WITH COUPLING ADAPTOR.

![](_page_32_Figure_5.jpeg)

![](_page_32_Figure_6.jpeg)

### NOTES:

- 1. ALL POTABLE WATER CROSSINGS OF EXISTING OR PROPOSED UTILITIES, OR OTHER UNDERGROUND OBSTRUCTION SHALL BE
- 4. UPON APPROVAL OF CITY OF FALLON ENGINEER OR PUBLIC WORKS DIRECTOR, THE ABOVE ASSEMBLY MAY BE REPLACED WITH

### LOWERING WATER MAIN

N.T.S.

![](_page_32_Picture_16.jpeg)

![](_page_32_Figure_18.jpeg)

- 1. OPERATION NUT SHALL BE  $1\frac{1}{2}$ " PENTAGON.
- 2. PAINT CURB RED 15' EITHER SIDE OF THE FIRE HYDRANT.
- 3. 6" DIAMETER SCHEDULE 40 STEEL BOLLARD GROUTED SOLID WITH CONCRETE. EXTERIOR PAINTED WITH 2 COATS OF 5 MIL (DRY FILM THICKNESS) SAFETY YELLOW.
- 4. MOUND CONCRETE TO ROUTE WATER AWAY FROM POLE. PROVIDE 1" ELEVATION DROP FROM POLE TO EXTERIOR OF CONCRETE COLLAR.
- 5. ALL JOINTS BETWEEN VALVE AND 90° ELBOW SHALL BE MECHANICALLY RESTRAINED.

### **FIRE HYDRANT**

AIR RELEASE VALVE

TYPICAL ELECTRICAL CONDUIT TRENCH SECTION N.T.S.

BOLLARD (REFERENCE PLAN FOR LOCATION

178 SOUTH MAINE ST. FALLON, NV 89406 TEL: 775.424.2188 WWW.LUMOSINC.COM INFO@LUMOSINC.COM © LUMOS & ASSOCIATES, INC.: THIS DRAWING IS THE PROPERTY OF LUMOS & ASSOCIATES, INC... USE OR REPRODUCTION OF THIS DRAWING, IN WHOLE OR IN PART, WITHOUT THE WRITTEN PERMISSION OF LUMOS & ASSOCIATES, INC. IS STRICTLY PROHIBITED. THIS DRAWING IS NOT TO BE USED FOR ANY PROJECT OTHER THAN THE PROJECT FOR WHICH IT WAS PREPARED. **GREENBLA** Exp: <u>06-30-23</u> CIVIL 9/9/2022 DW/ 4 Ο Ľ Ο Ш Υ C  $\bigcirc$ Μ Š ш R  $\square$ Ш Ľ Ш S M Ζ ဟ RMA 뀌 S <del>ທ</del>ີ ບ Dĸ Ш OR CON BAR IS 1 INCH ON ORIGINAL DRAWING

LUMOS

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

![](_page_32_Picture_34.jpeg)

DRAWN BY: RHH DESIGNED BY: RHH CHECKED BY: AJG 10514.000 JOB NO .:

5

![](_page_33_Figure_0.jpeg)

INFILTRATION CHAMBERS SHALL BE LOCATED WITHIN SANDY SOIL LAYER EXHIBITING A PERCOLATION RATE OF 10 MIN./INCH OR LESS. IF SANDY SOILS ARE NOT ENCOUNTERED, CHAMBER AREA SHALL BE OVER-EXCAVATED AND BACK FILLED WITH SAND, COORDINATE WITH DESIGN ENGINEER.

# SC-740 STORMTECH CHAMBER

N.T.S.

![](_page_33_Figure_4.jpeg)

NYLOPLAST DRAIN BASIN WITH WEIR

COVER ENTIRE ISOLATION ROW WITH AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE OR APPROVED EQUAL 2 LAYERS OF AASHTO M288 CLASS 1 WOVEN – GEOTEXTILE OR EQUAL, BETWEEN FOUNDATION

STONE AND CHAMBERS

![](_page_33_Figure_13.jpeg)

# **OBSERVATION PORT**

CHRISTY G-5 TRAFFIC VALVE BOX

SC-740 CHAMBER

AASHTO M288 CLASS 2

NOTES:

NON-WOVEN GEOTEXTILE

OR EQUAL

· 4 .

· · · · · ·

WITH CAST IRON LID MARKED STORM ·

N.T.S.

### NOTES:

- 1. WEIR AVAILABLE FOR ALL 18" 30" STRUCTURE OPTIONS (CUSTOM BASIN, ROAD & HIGHWAY, & CURB INLET) 18" WEIR CONSTRUCTION LIMITED - CALL FOR DETAILS.
- 2. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS SEE DRAWING NO. 7001-110-065.
- 3. HEIGHT OF WEIR TO BE DETERMINED BY ENGINEER.
- 4. WEIR CUSTOM MANUFACTURED WITH STAINLESS STEEL TO MINIMIZE LOSS OF OUTLET PIPE OPEN AREA.
- 5. ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012, 7001-110-013, & 7001-110-014.
- 6. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC.
- 7. FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05. 8. EDGES OF CONCRETE COLLAR SHALL BE TOOLED TO A 1/4" RADIUS
- MINIMUM.

CONCRETE COLLAR SEE #200 DROP INLET DETAIL FOR ADDITIONAL INFORMATION

. 4 ⊿ . ۰. ۰۰. ۰۰. ۵. . **⊿**∙

### NOTES:

- 1. ALL P.C.C. MEDIAN CURB SHALL BE FIBER-REINFORCED P.C.C. AND MEET 4,000 PSI MIN. AT 28 DAYS
- 2. ALL CONCRETE MEDIAN CURB SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.
- 3. AGGREGATE BASE MATERIAL SHALL CONFORM TO THE SPECIFICATIONS FOR TYPE 2 CLASS B AGGREGATE BASE AND BE COMPACTED TO A MIN 96% M.D.D.

- OUTLET WEIR

FIRST

FLUSH

OUTLET

# TYPE I P.C.C. MEDIAN CURB

3

![](_page_33_Figure_34.jpeg)

IF NOT ONE INCH ON THIS SHEET,

ADJUST SCALES ACCORDINGLY

**C8.5** 

RHH

RHH

AJG

10514.000

DRAWN BY:

DESIGNED BY:

CHECKED BY:

JOB NO.:

![](_page_34_Figure_0.jpeg)

	NEVADA DE OF TRANSF																											
CING STEEL: All reinforcing steel to be	PARTMEN			H MAXIMU	SPAN, "S" IEIGHT, "H" IM EARTH CC	VER	FT. FT. FT.	3 10	20 10	5 4 20	5 10	20 1	3 10 20	0 10	6 4 20	5 10	20 10	6 20	3 10	20	4 10 2	0 10	7 5 20	6 10	20	7 10 2	0 10	4 20
are center to center. ION: Box culverts are shown on plans les height times length, 10' x 8' x 196' RCB.	N IT SIG			OOF ALLS IVERT	T1 T2 T3		IN. IN. IN.	9½ 9 8 8	9½ 9½ 8 8 8 8	9½ 8 8	9½ 8 8	9½ 1 8 8	10 10 8 8 9 9	0 10 8 8 9 9	10 8 9	10 8 9	10 10 8 8 9 9	9 10 8 9	10 8 10	10 / 8 10	10     10       8     8       10     1	)     10       )     8       0     10	10 8 10	10 8 10	10 1 8 10	10 1 8 8 10 1	0 10½ 3 8 0 10½	10½ 8 10½
ic loads will be placed directly on face of the culvert, and/or up to 2-feet ase top slab thickness by ½-inch and cover forcement from 2-inches to 2 ½-inches. Provide ed reinforcement in top slab, except in ty. Decrease spacing of top slab bottom I bars, No. 4 @ 12-inches, to 6-inch spacing. Use d Major concrete, Class E Modified in Clark County, ass DA. Adjust quantities accordingly. : 4,500 PSI @ 28 Days. hal notes, see detail CH-1.	CHIEF BRIDGE ENGR. ADOPTED REVISED			BA           a"         SP           LEI         BA           b"         SP           LEI         B           c"         SP           b. 4 @ 1:         1:           ONCRE         EINFOR	R SIZE ACING NGTH R SIZE ACING NGTH R SIZE ACING VGTH 2" LENGTH 2" LENGTH 2" NUMBEI TE CEMENT	l {*	IN. FTIN. FTIN. FTIN. FTIN. FTIN. C.F./L.F LB./L.F	4         6         6         6         5-7         2-8         4         12         4         2-7         40         13.2         13.2         13.2	5       4         6       6         6       6         5-7       6-1         2-8       2-8         4       4         12       12         2-7       2-7         2-7       2-7         3.2       14.0         90       88	5         6         6         6         6-1         2-8         4         12         5         2-7         44         5         2-7         44         5         2-7         44	4       6         6       4         6       6         7       2-8         4       12         6       2-7         48       15.9         95       1	5     6       6     6       6     7       5     2.8       2.28     2.2       4     -       12     -       6     4       2.7     3       48     2       15.9     11       104     5	5         5           6         6           7         7           4         4           6         6           5-9         5           10         2'           4         4           12         1:           1:-2         4-           5-5         3-           5.6         15           399         9:	5     5       6     7       4     6       9     6-3       10     2-10       4     2       12     5-2       5     3-5       4     48       6     16.9       9     106	5 6 7 4 6 6-3 2-10 4 12 5-2 3-5 48 16.9 106	5       6         7       4         6       6         6-9       6         2-10       2         4       12         6-2       6         3-5       5         52       3         18.3       1         113       1	5         5           6         6           7         7           4         4           6         6           5-9         7-3           -10         2-10           4         4           12         12           3-5         3-5           552         56           8.3         19.4           13         115	5         6         7         4         6         7-3         0         2-10         4         2         7-2         3-5         56         56         6         19         119	5         6         8         4         5-11         2-11         4         12         4-3         4-2         48         17.9         108	6       6       8       4       6       5-11       6       2-11       2       4       4-3       4-3       4-3       4-3       12       12       17.9       1       123       1	$     \begin{array}{r}       5 & 6 \\       6 & 6 \\       8 & 8 \\       4 & 4 \\       6 & 6 \\       6 -4 & 6 \\       2-11 & 2 \\       4 & 4 \\       12 & 1 \\       5-3 & 5 \\       4-2 & 4 \\       52 & 5 \\       \hline       19.2 & 19 \\       115 & 12 \\       \hline       115 & 12 \\       \hline       \\       115 & 12 \\       \hline       \\       115 & 12 \\       \hline   \end{array} $	5 6 8 4 5 5 6-10 11 2-11 4 2 12 3 6-3 2 4-2 2 5 6 3 6-3 2 4-2 2 5 6 3 6-3 2 4-2 2 5 6 9 121	6 6 8 4 6-11 2-11 4 12 6-3 4-2 56 20.6 136	5 6 8 4 6 7-4 2-11 4 12 7-3 4-2 60 21.9 128	6         8         4         6         7-5         7.7         2-11         2         4         7-3         8         4-2         60         21.9         21.9         143         1	5         6           6         6           8         8           4         5           6         6           -11         3           4         5           12         1           3-3         8           -1-2         3           3-4         6          2         3-3           3-2         3-3           3-3         16	5       5         6       6         6       6         6       6-6         4       3         5       4         2       12         3       5-4         4       56         -       -	7 6 9 5 6 7-2 3-5 4 12 5-4 4-2 56 21.7 183
		r.	F		SPAN, "	S"		FT.			7	0	12			10	44		10							14	11	
			-		XIMUM EAR	H COVER	२	FT.	10 2 11 1	0 10 3 11	7 20 13	8 10 11	20 13	9 10 20 11 13	) 10 3 11	20 13	10 2 11 1	20 10 3 11	12 20 13	10 13	20	0 10 20 13 1:	) 10 5 13	9 20 15	10	20 15	10 20 13 15	1( 1)
	דע		-		LS T ERT T BAR SIZE SPACING	2 3		IN. IN.	10 1 12 1 7 8 6 9	2 10 5 12 3 7 6 6	12 15 8 6	10 12 7 6	12 15 8 6	10 12 12 15 7 8 6 6	2 10 5 12 7 6	12 15 8 6	10 1 12 1 7 8 6 6	2 10 5 12 8 7 6 6	12 15 8 6	12 14 7 6	13 17 8 6	12         13           14         17           7         8           6         6	12 14 7 6	13 17 8 6	12 14 7 6	13 17 8 6	12 13 14 17 7 8 6 6	12 14 7
	CB CU				LENGTH BAR SIZE SPACING			FTIN.	13-4 13 6 6	-8 13-4 7 6 6 6	13-8 7 6	13-4 6 6	13-8 1 7 6	3-4 13- 6 7 6 6	8 13-4 6 6	13-8 7 6	13-4 13 6 7 6 6	3-8 13-4 7 6 6 6	4 13-8 7 6	15-8 6 6	15-10 1 7 6	5-8 15-1 6 7 6 6	0 15-8	3 15-10 7 6	15-8 6 6	15-10 1 7 6	5-8 15-1 6 7 6 6	0 15 6
	LVER				LENGTH B BAR SIZE			FTIN. FTIN.	9-5 10 4-5 4 4	-5 9-11 5 4-5 5 4	10-11 5 5	10-5 4-5 4	11-5 1 5 4 5	0-11 11-1 4-5 5 4 5	11 11-5 4-5 4	12-5 5 5	11-11 12 4-5 { 4 {	-11 12- 5 4-5 5 5	5 13-5 5 5 6	10-6 4-9 4	11-5 5-4 5	11 11-1 4-9 5-4 4 6	1 11-6 4-9 4	3 12-5 6 5-4	12 4-9 4	12-11 1 5-4 6	2-6 13- 4-9 5-4 4 6	5 1: 4- 4
	<b>S SING</b>			IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	SPACING LENGTH 4 @ 12" LE 4 @ 12" NU	NGTH IMBER*		IN. FTIN. FTIN.	12     1       7-6     7-       6-6     5       80     8	2 12 11 8-6 ·8 6-6 0 84	12 8-11 5-8 84	12 9-6 6-6 88	12       9-11     1       5-8     0       88     9	12 12 0-6 10-1 6-6 5-8 92 92	2 12 11 11-6 3 6-6 2 96	12 11-11 5-8 96	12     1       12-6     12       6-6     5       100     10	2 12 -10 13- -8 6-6 00 104	12 6 13-11 5 5-8 4 104	12 8-10 8-1 92	12 9-3 § 7-3 92	12         12           -10         10-           8-1         7-3           96         9f	12 3 10-1 3 8-1 3 10(	12 0 11-3 7-3 0 100	12 11-10 8-1 104	12       12-3     1       7-3     1       104     1	12 12 2-10 13- 8-1 7-3 108 104	1: 3 13- 3 8- 8 11
					ICRETE NFORCEMEN	T	(	C.F./L.F. LB./L.F.	36.2 44 295 39	.7 37.9 94 305	9 46.7 6 407	39.5 315	48.7 4 420 3	1.2 50. 325 43	7 42.9 3 335	52.7 446	44.5 54 345 45	4.7 46. 59 36	2 56.7 5 485	50.0 338	58.3 5 446 3	2.0 60. 348 46	4 54.0 8 358	0 62.6 3 482	56.0 368	64.8 5 496 3	8.0 66. 378 51	9 60 0 38
			3	QUANTI	TY INCLUDES N	o. 4 CORNE	R BARS								1									_				
	SPEC. # 502,505 DETAIL NUMBER CH-2A																											
	NEV	Γ																										
TES: For additional notes see detail CH-1.	ADA DEPARTMENT TRANSPORTATION																											
,	CHI		_	F			SI	NGL	EΒ	CX											D	DUE	LE	BC	X			
			AN	GH	0 SKEW	1	15 SKEW		3	0 SKEV	v		45	SKEW			0 SKEV	N		15	5 SKEV	/		30	SKEW			45 S

	TABLE														
E = FEET INCHES	F = FEET INCHES	J = SIZE	J = SPACING	K = SIZE	K = SPACING										
1	3-6	5	12	5	12										
1-3	4	5	12	5	12										
1-6	4-9	5	12	5	12										
1-9	5-3	5	6	5	6										
2-3	6	5	6	5	6										
2-6	6-6	5	6	5	6										
2-9	7	6	6	5	6										
3-3	7-9	6	6	6	6										
3-6	8-3	6	6	6	6										
4	9	7	6	6	6										
4-3	9-6	7	6	7	6										
4-6	10-3	7	6	7	6										

							SINGL	E BO	X				DOUBI	E BO	Х				
		SPAN	IEIGH	0 SKEW		15 \$	SKEW	30 5	KEW	45	SKEW	0 SK	EW	15 SI	KEW	30 5	SKEW	45 \$	KEW
				CONC.	REINF.	CONC.	REINF.	CONC.	REINF.	CONC.	REI								
AL			3	12.28	971.5	12.54	983.7	13.45	1058.2	15.42	1214.4	14.20	1216.6	14.53	1237.5	15.67	1341.3	18.14	15
oΞ		5	4	17 33	1359.4	17 69	1374.3	18.91	1502.6	21.55	1690.2	19.26	1604.6	19.68	1628.2	21.13	1785 7	24 27	20
zĢ		ľ	5	23.47	1822.1	23.94	1885 1	25.54	1991 1	29.00	2258.5	25.40	2067.3	25.03	2138.9	27.76	2274.2	31 72	26
<u>"</u> ."			3	12.62	994.4	12 90	1003.1	13.84	1084.7	15.00	1246.8	14.88	1281.7	15.24	1304.9	16.46	1416.4	19.10	16
m		6	4	17.67	1382.4	18.05	1398.1	19.30	1529.1	22.03	1722 7	19.00	1669.7	20.39	1695.5	21.91	1860.9	25.23	21
		ľ	5	23.81	1845.0	24.30	1908.9	25.93	2017.6	22.00	2291.0	26.07	2132.3	26.64	2206.3	28.54	2349.3	32.68	26
- <u></u> A			6	31.21	3276.9	31.82	3350.2	33.90	3596.8	38.43	4052.2	33.47	3564.2	34.16	3647.6	36.52	3928.5	41.63	44
<u>7</u> 8			3	12.95	1017.4	13.25	1031.2	14.24	1111.2	16.38	1279.3	15.56	1346.8	15.94	1372.3	17.24	1491.6	20.06	17
97E			4	12.00	1405.3	18.40	1421.9	19.69	1555.6	22.51	1755.2	20.61	1734.7	21.09	1762.0	22.70	1936.0	26.00	22
00		7	5	24.15	1868.0	24.65	1932.6	26.32	2044 1	22.01	2323.5	26.75	2197.4	27.34	2273.7	20.32	2424.5	33.64	27
		'	6	31.55	3299.8	32 17	3374.0	34 30	3623.3	38.01	4084.7	34.15	3629.3	34.87	3715.0	37 30	4003.7	42.59	45
			7	41 74	4287.7	42.55	4373.9	45 29	4665.0	51.25	5303.4	44.34	4617.1	45.24	4715.0	48.29	5045.4	54.93	57
- R			4	18.35	1428.3	18 75	1445.6	20.09	1582.1	22.99	1787.6	21.29	1799.8	21 79	1830.3	23.48	2011.2	27 15	23
SE		8	5	24.49	1890.9	25.00	1956.4	26.00	2070.6	30.44	2355.9	27.43	2262.5	28.04	2341.1	30.11	2499.6	34.60	28
			6	31.89	3322.8	32.53	3397.7	34 69	3649.8	39.39	4117.2	34.83	3694.3	35.57	3782.4	38.08	4078.9	43.55	46
υü		ľ	7	42.08	4310.6	42.90	4397.7	45.68	4691.5	51 73	5335.9	45.02	4682.2	45.95	4782.3	49.08	5120.6	55.89	58
			8	57.13	5029.9	58 23	5123.6	61.00	5476.9	70.11	6183.8	60.49	5401.4	61 72	5508.3	65.86	5905.9	74.87	67
			5	25.17	1936.9	25.70	2003.9	27.50	2123.6	31.40	2420.8	28 79	2392.7	29.45	2475.8	31.67	2649.9	36.52	30
			6	32.57	3368.7	33.23	3445.2	35.47	3702.8	40.35	4182.1	36.18	3824.5	36.97	3917.2	39.65	4229.2	45.47	48
	1	10	7	42 76	4356.5	43.60	4445.2	46.47	4744 5	52.69	5400.8	46.38	4812.4	47.35	4917.1	50.65	5270.9	57.80	60
			8	57.90	5075.8	59.04	5171 1	62.87	5529.9	71.21	6248 7	62.05	5531.6	63.33	5643.0	67.66	6056.2	77.07	68
			9	72.13	7054.6	73.52	7173.0	78.22	7633.8	88.44	8678.9	76.34	7519.0	77.88	7653.8	83.08	8170.1	94.39	93
			10	85.93	8969.1	87.56	9174.6	93.10	9740.4	105 14	11034.9	90.14	9433.6	91.92	9655.4	97.96	10276.7	111.00	116
			6	33.24	3414.6	33.03	3492.8	36.26	3755.8	41 31	4247.0	37.54	3954.7	38.38	4051.9	41.22	4379.5	47.38	50
			7	43.44	4402.4	44.31	4492.0	47.25	4797.5	53.65	5465.7	47.73	4942.5	48.76	5051.9	52.21	5421.2	59.72	62
			8	58.68	5121.7	59.84	5218.6	63.77	5582.9	72.31	6313.7	63.60	5661.8	64.94	5777.8	69.45	6206.5	79.27	70
		12	9	72 01	7100.5	7/ 32	7220.5	70.12	7686.8	89.54	87/3.8	77.89	7649.2	79.49	7788.6	8/ 88	8320.4	96.59	05
		12	10	86.70	9015.1	88.37	0222.1	94.00	9793.4	106.24	11000.8	01.60	9563.8	03.53	9790.2	04.00	10427.0	113 20	11
			11	104.77	10624.6	106.75	10851.2	113.47	11552.2	128.07	12986.4	109 75	11173 3	111 91	11419.3	110.23	12185.8	135.12	13
- I			12	121 70	1/253 3	123.98	14537.9	131 73	15/15 5	1/8 55	17/29.9	126.68	1/1802.0	129.15	15106.0	137.48	16049 1	155.61	18
≤ <del>-</del>			7	121.70	14200.0	120.00	4540.2	/8.03	4850.5	54.61	5530.6	120.00	5072.7	50.16	5186 7	53 78	5571.5	61.64	64
¤≈ I			8	59.46	5167.6	60.65	5266.2	64.67	5635.0	73./1	6378.6	65.16	5792.0	66 55	5012.6	71.25	6356.0	81.47	72
Ξ₩			9	73.68	7146.4	75.13	7268.0	80.02	7739.8	90.64	8808.7	79.45	7779.4	81 10	7923.4	86.67	8470.7	98.79	07
-0		12	10	87.48	9061.0	89.17	9269.6	94.90	9846.4	107 34	11164.8	93.25	9694.0	95.14	9925.0	101.55	10577.3	115.49	120
		12	11	105 54	10670.5	107.56	10898.7	114 37	11605.2	129 17	13051.3	111 31	11303 5	113 52	11554.0	121.02	12336.1	137 32	130
22			12	122 47	14299.2	124 79	14585.5	132.62	15468 5	149.65	17494.8	128.24	14932.2	130.76	15240.8	139.28	16199.4	157.80	183
2 M			13	144.90	17398.9	147.61	17725.7	156.79	18876.0	176.75	21303.0	150.66	18031.9	153 58	18381.0	163.45	19606.9	184.90	221
ミ꼬			14	165.16	19761.4	168.23	20111.3	178.64	21342.9	201.25	24093.8	170.92	20394.4	174.20	20766.7	185.29	22073.8	209.40	249
0 - 0													Con addi betv	QUANT DDITIO crete for two tional cell, cu veen the tripl	ITIES F NAL CI Type II head J. yards. Add e box and do	OR ELLS walls for eac the differen uble box qua	h ce antities		
													for e	each addition	al box.	adwalla far -	ach		

Reinforcing for two Type II headwalls for each additional cell, pounds. Add the difference between the triple box and double box quantities for each additional box.

SPEC. # 502,505 DETAIL NUMBER

B CULVERTS

ADOPTED 11/1970

3 문

![](_page_34_Figure_7.jpeg)

![](_page_34_Figure_8.jpeg)

![](_page_35_Figure_0.jpeg)

![](_page_35_Figure_1.jpeg)

# **TYPICAL STAIR**

N.T.S.

1

![](_page_35_Figure_6.jpeg)

### GENERAL NOTES:

- OR LANDING AREA.
- 2. NO LIP SHALL BE PERMITTED AT THE CURB RAMP SLOPE TO GUTTER PAN.
- AND FEATHERED AT 12:1 IN LINE WITH THE SIDEWALK.
- TO THE SIDEWALK. 5. ALL RAMPS SHALL BE 12:1 OR FLATTER.
- 7. ALL SLOPE RATES ARE RELATIVE TO LEVEL.
- UNDER TRUNCATED DOMES SHALL BE 6" THICK MINIMUM.
- 10. GUTTER SHALL MAINTAIN POSITIVE DRAINAGE TO PREVENT PONDING.
- CHARACTERISTICS:
  - 4000 PSI MIN. COMPREHENSIVE STRENGTH AT 28 DAYS. • 6 SACKS OF CEMENT PER CUBIC YARD MAX.
  - WATER-CEMENT RATION OF 0.45
  - AIR ENTRAINMENT 6% ±1.5%
  - SLUMP AT 1 TO 4 INCHES.

# P.C.C. PEDESTRIAN RAMP

1. GRATINGS OR SIMILAR ACCESSES SHALL NOT BE LOCATED IN AREA AT THE BASE OF THE CURB RAMP

3. A.C. PAVING SHALL BE FLUSH WITH THE EDGE OF THE GUTTER PAN IN THE AREA OF THE CURB RAMP,

4. ROUGH BROOM TEXTURE ON CURB RAMPS AND WINGS. TEXTURE SHALL PROVIDE A VISUAL CONTRAST

6. RAMP LENGTH SHALL BE 6" MINIMUM (TYP. U.N.O.) REFERENCE PLAN FOR RAMP LONGER THAN 6'.

8. DETECTABLE WARNING SHALL BE CONSTRUCTED WITH RED 'ARMORCAST WET SET PANEL' (OR APPROVED EQUAL) AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS. CONCRETE DEPTH

9. NO LIP SHALL BE PERMITTED AT THE CURB RAMP SLOPE TO THE GUTTER PAN.

11. FIBER REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING

![](_page_35_Figure_33.jpeg)

DRAWN BY: DESIGNED BY: CHECKED BY: 10514.000 JOB NO.:

2

RHH

RHH

AJG