

DEPARTMENT OF PUBLIC WORKS



Mayor:
CAROLYN G. GOODMAN

City Council:
STAVROS S. ANTHONY (Mayor Pro-Tem)
LOIS TARKANIAN
STEVEN D. ROSS
RICKI Y. BARLOW
BOB COFFIN
BOB BEERS

City Manager:
ELIZABETH N. FRETWELL

Director of Public Works:
JORGE CERVANTES, P.E., P.T.O.E.

City Engineer:
DAVID N. BOWERS, P.E., P.T.O.E.

Funded By:
CITY OF LAS VEGAS
NEVADA DEPARTMENT OF
TRANSPORTATION
(PROJECT NO. SPSR-0159(003))

CHARLESTON BOULEVARD MEDIAN ISLAND LANDSCAPING

Reviewed By:

[Signature] 2/5/14
CLV CITY ENGINEER DATE

[Signature] 2/5/14
CLV PROJECT MANAGER DATE

[Signature] Feb. 5 2014
CLV CITY TRAFFIC ENGINEER DATE

[Signature] 2/5/14
CLV CONSTRUCTION MANAGER DATE

[Signature] 1-30-14
SOUTHWEST GAS CORPORATION DATE

[Signature] 1/30/14
CENTRAL TELEPHONE COMPANY, d/b/a CENTURYLINK DATE
THE AFFIXED APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY
FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED
IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED
PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR
PUBLIC UTILITY COMMISSION STANDARD REGULATIONS.

[Signature] 1/30/14
COX COMMUNICATIONS LAS VEGAS, INC. DATE

[Signature] 02/04/14
LAS VEGAS VALLEY WATER DISTRICT DATE
LVVWD PROJECT #116055
PROTECT WATERLINES IN PLACE. WHEREVER A WATERLINE IS WITHIN
18" ABOVE A STORM DRAIN LINE, OR WHERE COMPACTION UNDER
WATERLINE CANNOT BE MET, BACKFILL TRENCH WITH CEMENT SLURRY
OR FLOWABLE FILL TO THE SPRINGLINE OF THE WATERLINE. THIS
REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY, ADDITIONAL HEALTH
REGULATIONS MAY APPLY PER UDA'S 2.22

[Signature] 1-30-14
NV ENERGY - DISTRIBUTION DATE
NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND
WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH
THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY
EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS
COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY
CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC
UTILITY COMMISSION'S RULES AND REGULATIONS.

[Signature] 1-31-14
NV ENERGY - TRANSMISSION DATE

THE SIGNATURE ABOVE ACKNOWLEDGES THAT THE UTILITY COMPANY
REPRESENTATIVE HAS REVIEWED THE PLANS, AND THAT TO THE BEST
OF HIS OR HER KNOWLEDGE THE UTILITY LINES ARE SHOWN IN THE
CORRECT LOCATIONS AND ARE THE CORRECT SIZES. WHILE SUCH DATA
HAS BEEN COLLECTED WITH REASONABLE CARE, THERE IS NO
EXPRESSED OR IMPLIED GUARANTEE THAT THE LOCATIONS ARE EXACT.
THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY OF OBTAINING THE
ACTUAL FIELD LOCATIONS.

THE SIGNATURE ABOVE FURTHER ACKNOWLEDGES THAT THE UTILITY
COMPANY DOES NOT ANTICIPATE CONSTRUCTION OR MAINTENANCE IN
THE PROJECT AREA FOR 5 (5) YEARS IN CONFORMANCE WITH THE
CLV NO-CUT POLICY.

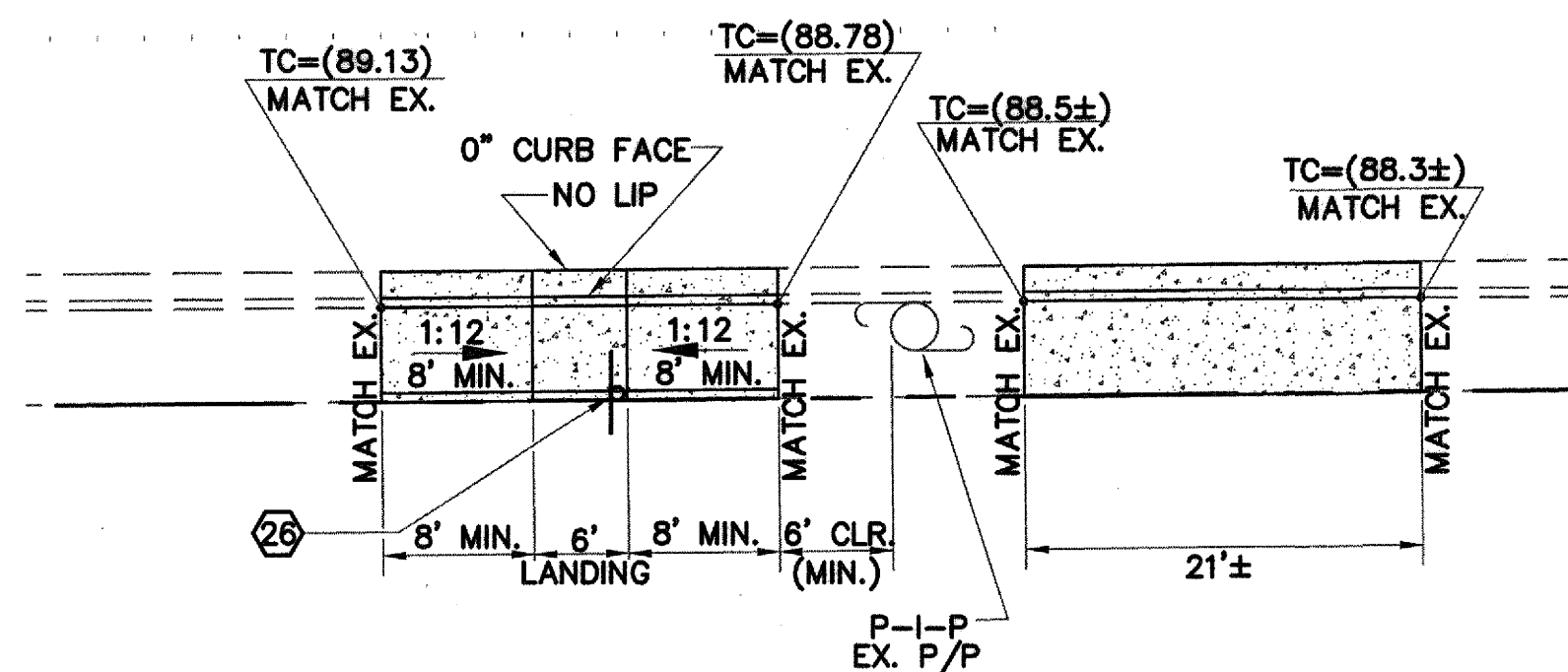
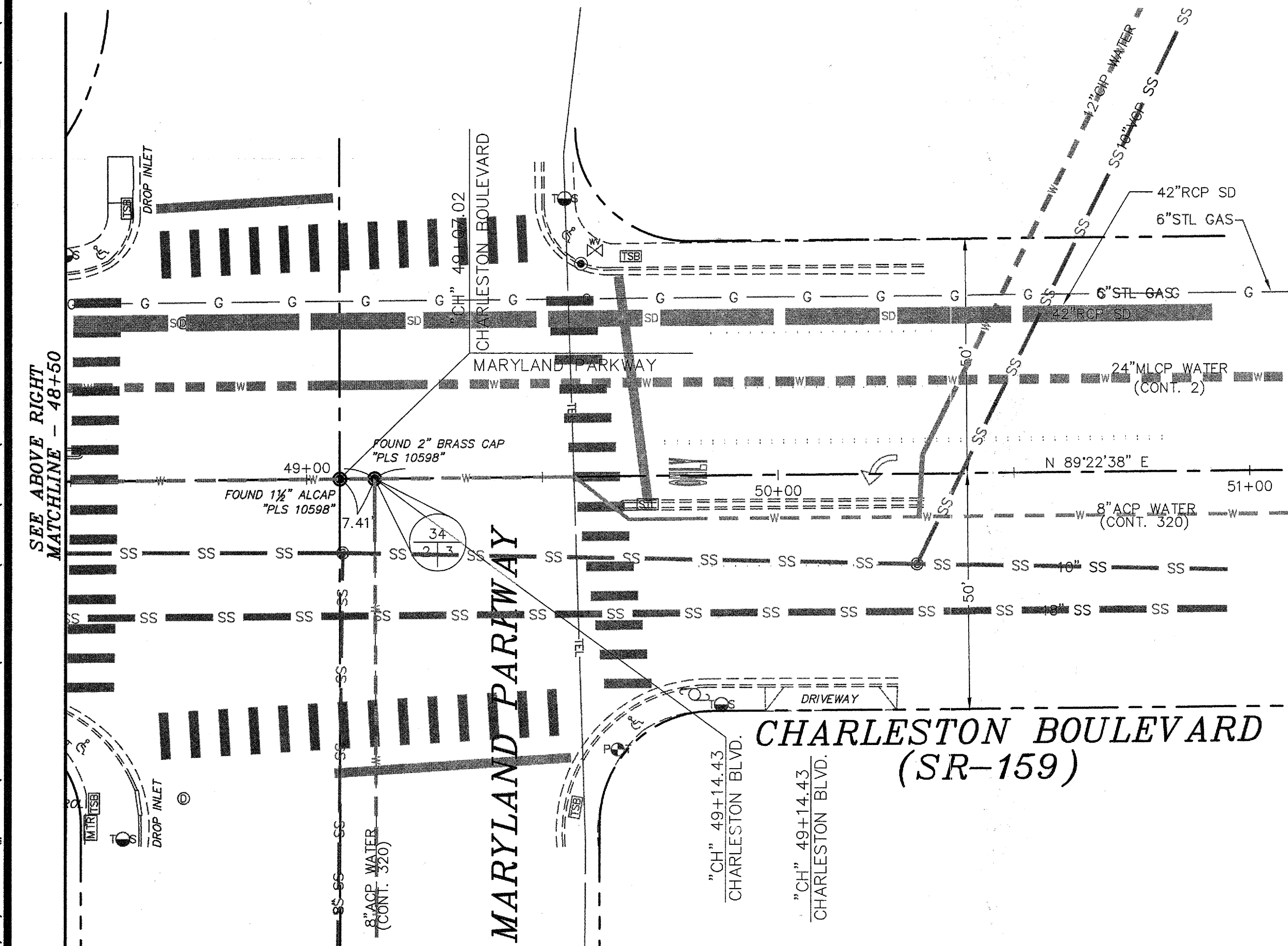
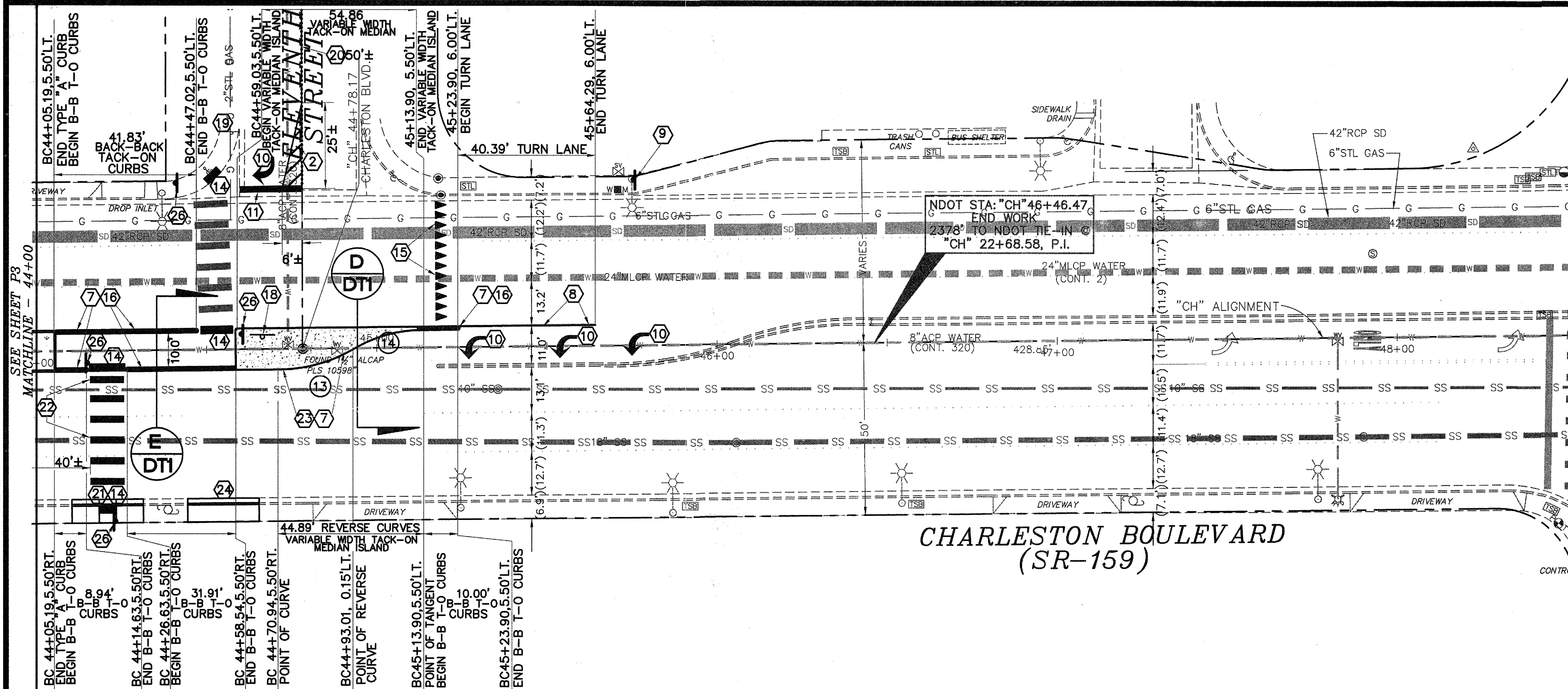
BID NO. 12.23870 H# 23870

REVISIONS	NO.	DATE	SHEET	DESCRIPTION	APP'D

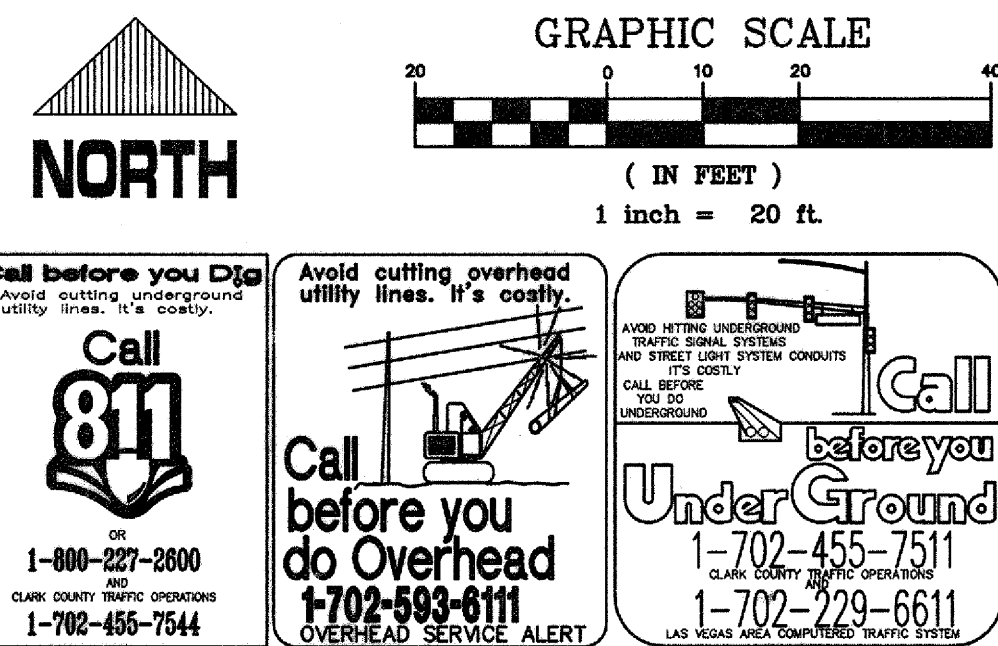
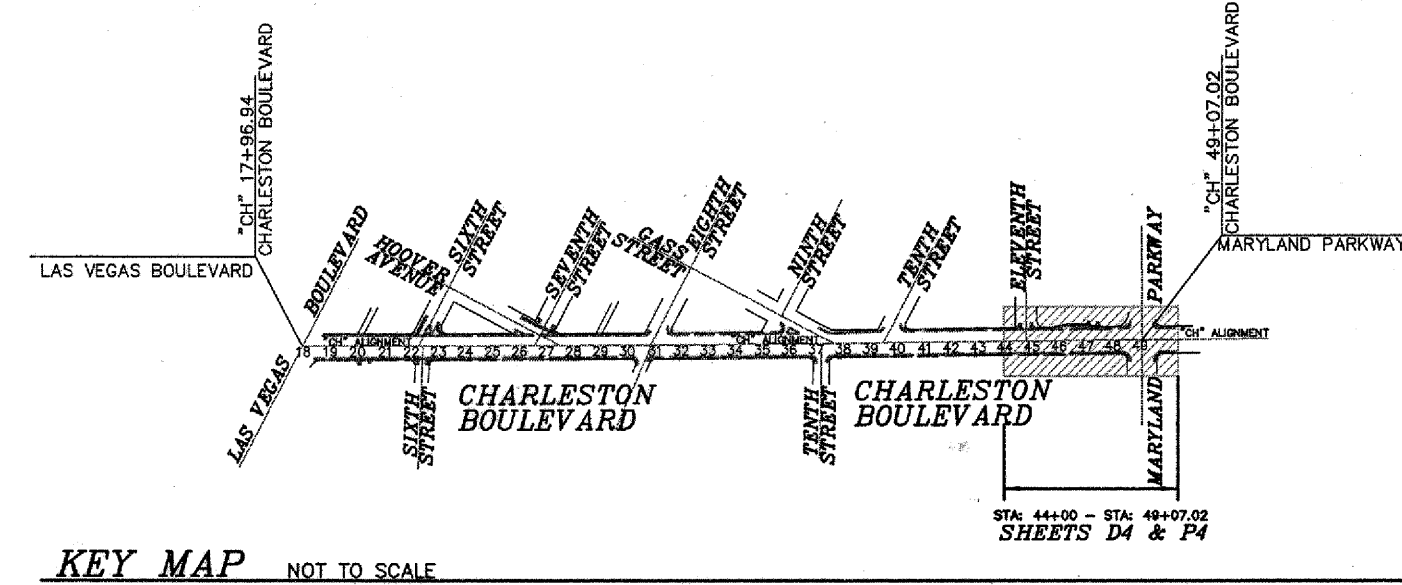
DEPARTMENT OF PUBLIC WORKS	CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E.
CAPITAL PROJECT MANAGEMENT	MARK SORESEN, P.E.
DESIGNED BY: GJJ	DATE: JANUARY 2014
DRAWN BY: GJJ	CHECKED BY: LLD

TITLE:	CHARLESTON BOULEVARD
SHEET:	MEDIAN ISLAND LANDSCAPING
	COVER SHEET

Sheet	CV
1 of 19	DRAWING NO. 107V5221



M
P4
SIDEWALK RAMP (AND RAMP REPLACEMENT)
SCALE: 1"=10'
REF: USD 234 (CASE 1) & 235



BASIS OF BEARINGS:

N 89°21'52" E, BEING THE CENTERLINE OF CHARLESTON BOULEVARD BETWEEN THE NORTH 1/4 CORNER OF SECTION 3 AND THE NORTHEAST CORNER OF SECTION 3, AS SHOWN ON A RECORD OF SURVEY, RECORDED IN BOOK 177, PAGE 4 OF SURVEYS, OFFICIAL RECORDS, CLARK COUNTY, NV.

BENCHMARK:

CITY OF LAS VEGAS BM "CHASS": RIVET & PLATE IN TOP OF CURB, NORTHEAST CORNER OF CHARLESTON BOULEVARD AND LAS VEGAS BOULEVARD. ELEV. 2019.57' (NAVD88)

CURVE DATA:

CURVE	RADIUS POINT	RADIUS	DELTA	LENGTH	TANGENT	COMMENT
(13)	44+71.41, 38.48'LT.	43.98'	30°01'56"	23.05'	11.80'	BACK OF CURB
(14)	45+12.88, 33.96'RT.	39.47'	31°41'52"	21.84'	11.21'	BACK OF CURB

CONSTRUCTION NOTES:

- CONSTRUCT TYPE "A" ISLAND CURB PER USD 219. TOP OF CURB TO BE MEASURED 6" ABOVE AC PAVEMENT SAWCUT.
- INSTALL "GORE OUT" CHEVRON STRIPING (NDOT TYPE 2 FILM) PER USD 245.
- RE-CONSTRUCT CONCRETE SIDEWALK PANEL PER USD 234. SEE DEMOLITION NOTE 5 ON SHEET D1.
- INSTALL #3 1/2 PULLBOX PER USD 326.
- INSTALL 3" STEEL SLEEVE VIA DIRECTIONAL BORING. SEE ELECTRIC SERVICE SLEEVE TRENCHING DETAIL "X" ON SHEET D11.
- INSTALL 2" ELECTRICAL CONDUIT W/ CONDUCTORS IN 3" STEEL SLEEVE.
- INSTALL MEDIAN ISLAND NOSE MARKINGS PER USD 248. PAINT ENTIRE LENGTH OF BACK TO BACK TACK-ON CURBS YELLOW. INSTALL ONE RPM PER 20' LENGTH OF CURB. ON EXISTING ISLANDS/CURBS, WITHIN PROJECT LIMITS, REPAINT CURBS AND REPLACE MISSING SIGNAGE.
- INSTALL ADDED LEFT TURN LANE (RPM'S) PER USD 246.
- INSTALL PEDESTRIAN CROSSING SIGN (W11-2) 36"x36" AND "AHEAD" SIGN (W16-9P) 24"x18" - FLOURESCENT GREEN.
- INSTALL "ARROW" LEGEND (NDOT TYPE 2 FILM). REF: USD 246.
- INSTALL STOP BAR (NDOT TYPE 2 FILM) PER USD 254A.
- INSTALL LANDSCAPING AND IRRIGATION. SEE LANDSCAPING PLANS L-1, L-2 & L-3. SEE IRRIGATION PLANS IR-1, IR-2, IR-3, IR-4 & IR-5.
- INSTALL WATER SERVICE. INSTALL 1" WATER METER AND 1" RPPA PER UDACS PLATES 4 AND 8.
- INSTALL DETECTABLE TACTILE WARNING STRIP PER USD 235.
- INSTALL YIELD BAR (NDOT TYPE 2 FILM) PER NDOT DWG. T-38.1.3.
- CONSTRUCT BACK TO BACK TACK-ON CURBS. REF: USD 220.
- INSTALL SIGN POST AND "LEFT TURN ONLY" SIGN (R3-5L) PER USD 249.
- INSTALL SIGN POST AND "ONE WAY" SIGN (R6-1(R)) PER USD 249.
- INSTALL "NO LEFT TURNS" SIGN (R3-2) ON TO EXISTING STOP SIGN POST.
- INSTALL TYPE 1 CENTERLINE (RPM'S) PER USD 244.
- CONSTRUCT TYPE "L" C&G PER USD 216 (MODIFIED FOR NONSTANDARD NDOT CURB FACE). CONSTRUCT CONCRETE SIDEWALK RAMP PER USD 235. SEE DETAIL "M" ON SHEET P4.
- INSTALL CROSS WALK (NDOT TYPE 2 FILM) PER USD 254A.
- CONSTRUCT VARIABLE WIDTH TACK-ON MEDIAN ISLAND PER USD 221.
- CONSTRUCT TYPE "L" C&G PER USD 216 (MODIFIED FOR NONSTANDARD NDOT CURB FACE). CONSTRUCT CONCRETE SIDEWALK PER USD 234. SEE DETAIL "M" ON SHEET P4.
- INSTALL "YIELD" SIGN (R1-5) 36"x36".
- CONSTRUCT 24" SQ. TYPE "C" FOUNDATION PER USD 717. INSTALL 15' POLE PER USD 806. LOCATIONS OF POLES TO BE FIELD VERIFIED DURING CONSTRUCTION. INSTALL PEDESTRIAN-ACTIVATED, SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM W/ PED. CROSSING SIGN (W11-2) 36"x36" "ARROW" SIGN (W16-7P) 24"x18" FLOURESCENT GREEN AND PUSH BUTTON SIGN (R10-2S) 5"x7".
- 3/4" OPEN GRADE (LIMITS DETERMINED BY NDOT INSPECTOR).

APPROVED FOR CONSTRUCTION
Las Vegas Valley Water District Engineering Services Manager
Project No. 116055 Date: 02/04/14

REVISIONS	NO.	DATE	DESCRIPTION	APP'D

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT
CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E.
PROGRAM MANAGER: MARK SORESENSEN, P.E.
DESIGNED BY: GJJ
DRAWN BY: GJJ
CHECKED BY: LLD
DATE: JANUARY 2014

CHARLESTON BOULEVARD
MEDIAN ISLAND LANDSCAPING
IMPROVEMENT PLAN
"CH" 44+00.00 TO "CH" 49+07.02

TITLE: SHEET: 1-24-14

107V5221
P4
10 of 19
DRAWING NO.

9 Planting Notes:

- GENERAL - ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY AND COUNTY CODES, AND THESE PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, COORDINATION, SCHEDULING, UTILITY VERIFICATION AND DAMAGE TO OTHER TRADES AND / OR UTILITIES, AS PER CONTRACT GENERAL CONDITIONS.
 - THE CONTRACTOR SHALL CAREFULLY INSPECT THE SITE AND VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH ANY WORK UNDER THIS CONTRACT.
 - ALL IRRIGATION WORK SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE BEGINNING ANY GROUND COVER PLANTING WORK.
 - THE OWNER'S REPRESENTATIVE WILL INSPECT THE PLANTING WORK PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND COORDINATE ALL INSPECTIONS.
 - THE QUALITY OF WORKMANSHIP AND MATERIALS SHALL BE OF THE HIGHEST STANDARDS. CO-OPERATION AND FLEXIBILITY IS EXPECTED OF THE CONTRACTOR TOWARD WORKING WITH THE OWNER / OWNER'S REPRESENTATIVE IN PRODUCING THE BEST POSSIBLE PRODUCT.
2. SCOPE OF WORK - FURNISH ALL MATERIAL, LABOR, TRANSPORTATION, EQUIPMENT AND PROPERTY TO COMPLETE THE LANDSCAPING OF THE PLANTING AREAS SHOWN ON THE DRAWINGS, OR REASONABLY IMPLIED TO COMPLETE THE CONSTRUCTION, INCLUDED AS A PART OF THE WORK, BUT NOT NECESSARILY LIMITED BY IT, ARE THE FOLLOWING ITEMS.
- REMOVE AND REPLACE WITH CLEAN SAND 2'-0" DEEP AT ALL PLANTING AREA. ADDITIONAL DEPTH REQUIRED AT PALMS.
 - FINE GRADING OF ALL PLANTING AREAS.
 - PREPARATION OF ALL PLANTING AND TREE HOLES.
 - FURNISHING AND INSTALLATION OF ALL REQUIRED PLANTING BACKFILL MATERIALS, TREE STAKES AND MISCELLANEOUS MATERIALS.
 - FURNISHING AND INSTALLATION OF ALL PLANT MATERIALS.
 - PROVIDING MAINTENANCE THROUGHOUT THE SPECIFIED MAINTENANCE PERIOD.
 - CLEAN-UP AND WEEDING OF ALL LANDSCAPE AREAS.
 - GARANTEE OF ALL PLANT MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
3. THE CONTRACTOR SHALL REMOVE ALL WEEDS, ROCKS OVER 1" DIAMETER, DEBRIS, AND OTHER EXTRANEOUS MATERIAL FROM THE JOB SITE IN A LEGAL MANNER PRIOR TO PROCEEDING WITH ANY WORK UNDER THIS CONTRACT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXPORT AND IMPORT OF SOIL NECESSARY TO PROVIDE ROUGH GRADE AND 2'-0" DEPTH OF NEW FILL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINISH GRADE IN PLANTING AREAS WITH 1% MINIMUM FLOW.
5. FINISH GRADES SHALL BE 1" BELOW ADJACENT CURBS IN GROUND COVER AREAS.
6. ALL TREES AND SHRUBS SHALL BE PLANTED PER THESE NOTES AND AS DETAILED. ALL PLANT MATERIAL SHALL BE OF THE HIGHEST QUALITY AND LARGEST REASONABLE SIZE AVAILABLE FOR THE SPECIFIED CONTAINER SIZE (WITHOUT BEING ROOT BOUND). SHRUB MATERIALS SHALL BE VIGOROUSLY GROWING, HEALTHY PLANT MATERIAL, FULL AND BUSHY. THE OWNER'S REPRESENTATIVE WILL APPROVE ALL PLANT MATERIAL WHEN SPOTTED FOR PLANTING AND WILL NOT HESITATE TO REJECT ANY MATERIAL OF QUESTIONABLE QUALITY, OR OF LESS THAN THE LARGEST REASONABLE SIZE MATERIAL AVAILABLE.
7. THE OWNER'S REPRESENTATIVE SHALL APPROVE THE LOCATION OF ALL THE FIVE GALLON PLANT MATERIAL AS APPROXIMATELY SPOTTED IN THE FIELD BY THE CONTRACTOR. ALL BOXED MATERIAL AND FIELD GROWN MATERIAL SHALL BE STAKED FOR LOCATION APPROVAL PRIOR TO PLANT PIT EXCAVATION.
8. UPON COMPLETION OF EACH PHASE OF PLANTING WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE SITE OF ALL ACCUMULATED RUBBISH, DEBRIS, AND OTHER EXTRANEOUS MATERIAL.
9. MAINTENANCE PERIOD - THE MAINTENANCE PERIOD SHALL COMMENCE UPON THE OWNER'S AND THE OWNER'S REPRESENTATIVE WRITTEN APPROVAL OF ALL PHASES OF PLANTING INSTALLATION AND SHALL BE FOR 90 DAYS INCLUDING A FERTILIZER APPLICATION. SEE SPECIFICATIONS.
10. MAINTENANCE PROCEDURES - THE GENERAL CARE AND MAINTENANCE OF ALL AREAS SHALL CONSIST OF PROPER WATERING, FERTILIZATION, WEEDING, CLEAN UP, AND AS FOLLOWS.
- CULTIVATE AND WEED AT NOT LESS THAN TEN (30) WORKING DAY INTERVALS.
 - CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEMS IN A LIKE NEW, OPERATING CONDITION, ADJUSTING DRIP EMITTERS AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PROPER WATERING OF ALL PLANTING AREAS AND SHALL REPLACE ANY MATERIAL DAMAGED DUE TO IMPROPER MOISTURE.
 - ANY CONCENTRATED DEVELOPMENT OF WEED GROWTH THAT MAY APPEAR IN PLANTING AREAS DURING MAINTENANCE PERIOD SHALL BE REMOVED AT THIRTY (30) DAY INTERVALS. THE CONTRACTOR MAY ELECT TO REMOVE SUCH CONCENTRATIONS OF WEEDS MANUALLY OR BY AN APPROVED HERBICIDE PROGRAM.
 - DURING THE COURSE OF THE MAINTENANCE WORK, THE CONTRACTOR SHALL REMOVE SURPLUS MATERIALS AND DEBRIS FROM THE SITE AND SHALL KEEP THE PREMISES IN A NEAT AND CLEAN CONDITION AT ALL TIMES.
 - DURING THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER MAINTENANCE OF ALL PLANTING AREAS. THE CONTRACTOR SHALL BE LIABLE FOR THE REPLACEMENT OF TREE AND SHRUB LOSS THROUGH NEGLIGENCE, IMPROPER PLANTING, IMPROPER CULTURE, OVER FERTILIZATION, CARELESS USE OF CHEMICALS, WEED CONTROLS, OR DAMAGE FROM EQUIPMENT OPERATED BY HIS EMPLOYEES.
 - REPLACEMENT OF PLANT MATERIAL SHALL BE OF SAME SPECIES, QUALITY, QUANTITY, AND SIZE AS INITIAL INSTALLATION. THE CONTRACTOR SHALL FOLLOW AND CONFORM TO ORIGINAL PLANTING TECHNIQUES AND METHODS FOR PLANT REPLACEMENT.
11. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE SUBMITTAL OF A SOIL SAMPLE WITH AN AGRICULTURAL SOILS SCIENTIST, AND RECEIVE A REPORT, A COPY OF THE REPORT SHALL BE SENT TO THE OWNER'S REPRESENTATIVE.
- BASED ON THIS SOILS ANALYSIS AND FERTILIZER RECOMMENDATION, IF ADDITIONAL FERTILIZER IS REQUIRED, THE CONTRACTOR IS REQUIRED TO SUPPLY IT.
- THIS TEST SHALL INCLUDE RECOMMENDATIONS FOR SOIL AMENDMENT, PLANTING BACKFILL, AND MAINTENANCE FERTILIZATION.
12. SUBMITTALS - THE CONTRACTOR IS TO SUBMIT COPIES OF ALL RECIPES FOR MATERIALS USED ON THE PROJECT. THESE INCLUDE PLANTS, BACKFILL, FERTILIZERS AND TABLETS, ETC. ALL RECEIPTS MUST LIST THE ITEM, QUANTITY, JOB LOCATION, DATE, AND THE SUPPLIER.

8 Soil Mix / Backfill Mix

General: Prior to delivery of topsoil, furnish the Owner with a written statement giving the location from which the topsoil is to be obtained and an agricultural analysis of the topsoil to be used. Provide an agricultural soils test for both import and native soils to be used.

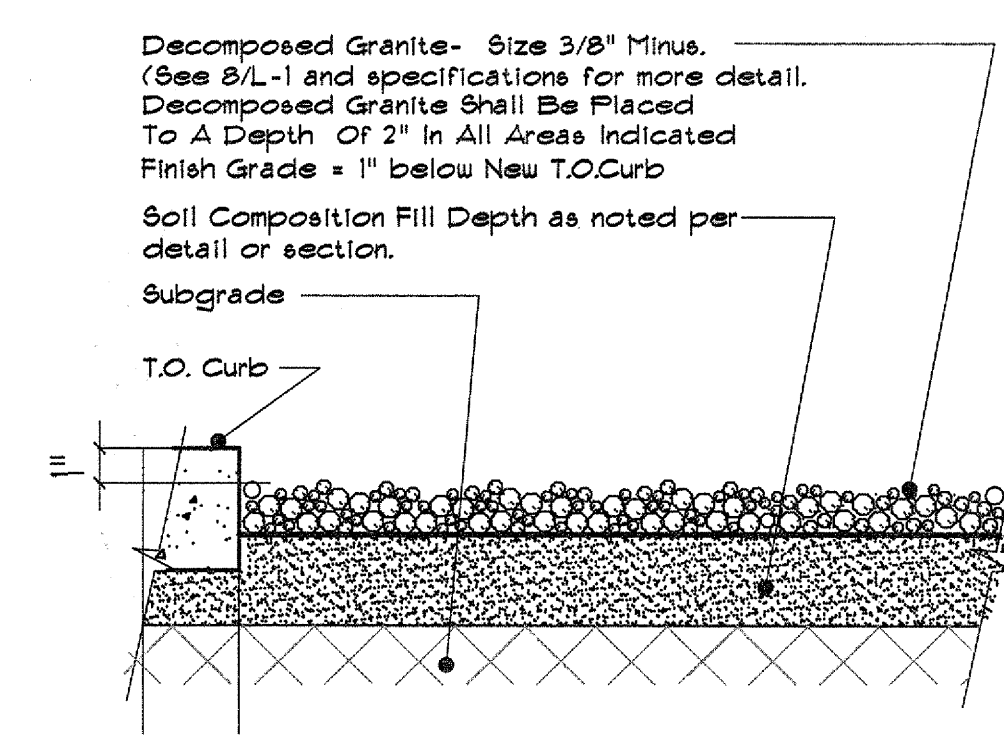
- Topsoil Composition: Use this topsoil mixture to replace the minimum excavation depth shown in corresponding sections 4/L-1 or 5/L-1 in new median landscape construction within this project.
All soil used for plantings, whether on-site or import shall be sandy or loamy sands from well-drained sites, free from refuse, root, heavy clay, stones larger than one inch in largest direction, gravel, sticks, brush litter and other deleterious substances. Soil must have less than ten (10) percent clay content and more than seventy-five (75) percent sand content. Soil Salinity-Ec shall be no greater than four mmhos/cm. Water holding capacity of soil shall be between 40 percent and 55 percent. Boron- less than one ppm, minimum pH value of 6 and maximum 8.5.
- Backfill Composition: 10 percent sandy loam soil by volume. Soil that is sandy loam in makeup as approved for use by the Landscape Architect as demonstrated by a soils test may be taken from the plant pit for use as backfill material or imported soil of a quality acceptable by the Landscape Architect meeting or exceeding the quality of on-site soils as demonstrated by a soils test shall be provided.
10 percent peat moss by volume.
10 percent wood chips by volume.
10 percent soil conditioner by volume.
Gro-Power Planting Tablets for extended feeding / soil conditioning at rate recommended by manufacturer.
The specified backfill materials shall be premixed using a soil grinder or equal, then turned several times with a front-end loader to a uniform, evenly blend consistency, free of all pockets of unblended material and any clods or stones greater than 1 inch in diameter. Backfill mix shall be delivered to each planting pit after mixing has occurred.
Another acceptable backfill mix shall be a pre-mix listed under the trade name "Nutri Mulch". This product is available through:
Nutri Mulch, Organic Soil Conditioner, P.O. Box 368 Moroni, Utah 84636 (800) 745-8232
- Palm Backfill for all Bare Root Palm Trees to consist of the following:
100% Washed Concrete Sand

4. DECOMPOSED GRANITE:
Install a 2" layer of Decomposed Granite. Match the color by Mineral Park Decorative Rock "Desert Coral" 3/8" minus.
On Sheet L-3 Median at Station 38+00 to 44+00 See detail 5/L-3 for design in its entirety and 3 and 4/L-3 for Stationing Layout.
Contrasting DG on this median only is to match Mineral Park Gold 3/8" minus See detail 6/L-1 for separation detail with 6" rock to match Desert Coral.
Before placing granite, compact sub-grade to 80% and apply a pre-emergent herbicide to soil, after placing granite, rake smooth wet entire depth, allow to dry.
Apply a secondary application of pre-emergent herbicide to top of granite. Keep top of granite 1" below adjacent curbs, do not allow granite or herbicides to touch the trunk of any plant. Install after plant material installation is completed.

SUBMITTAL APPROVAL REQUIRED BY LANDSCAPE ARCHITECT

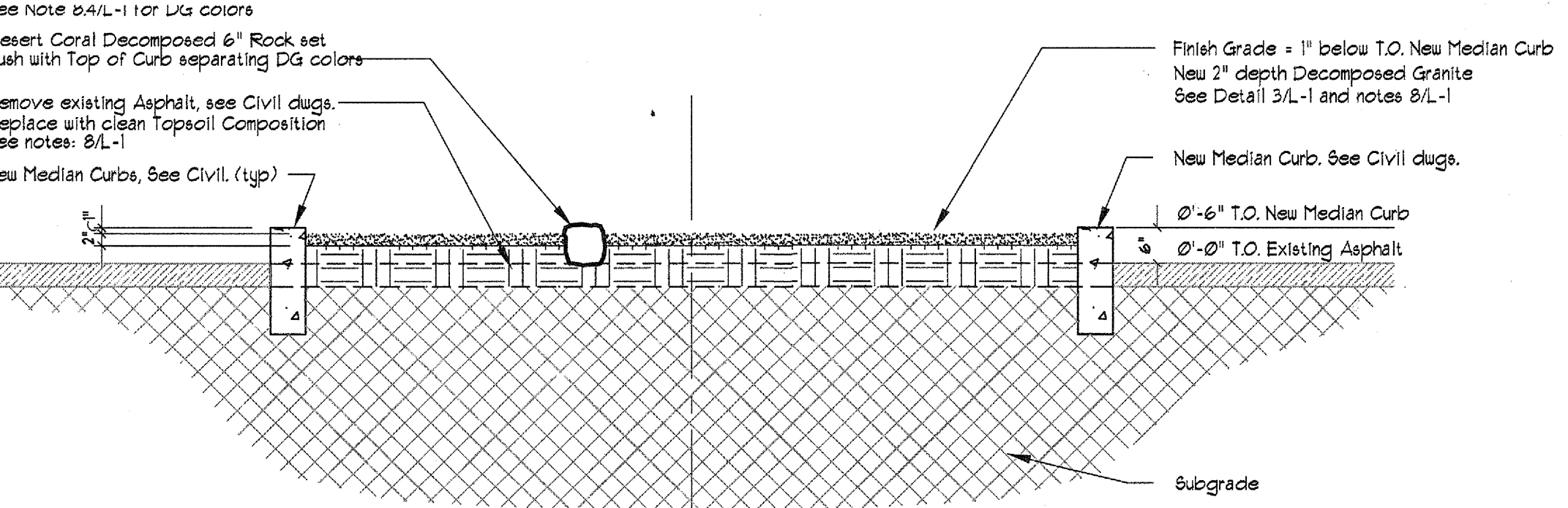
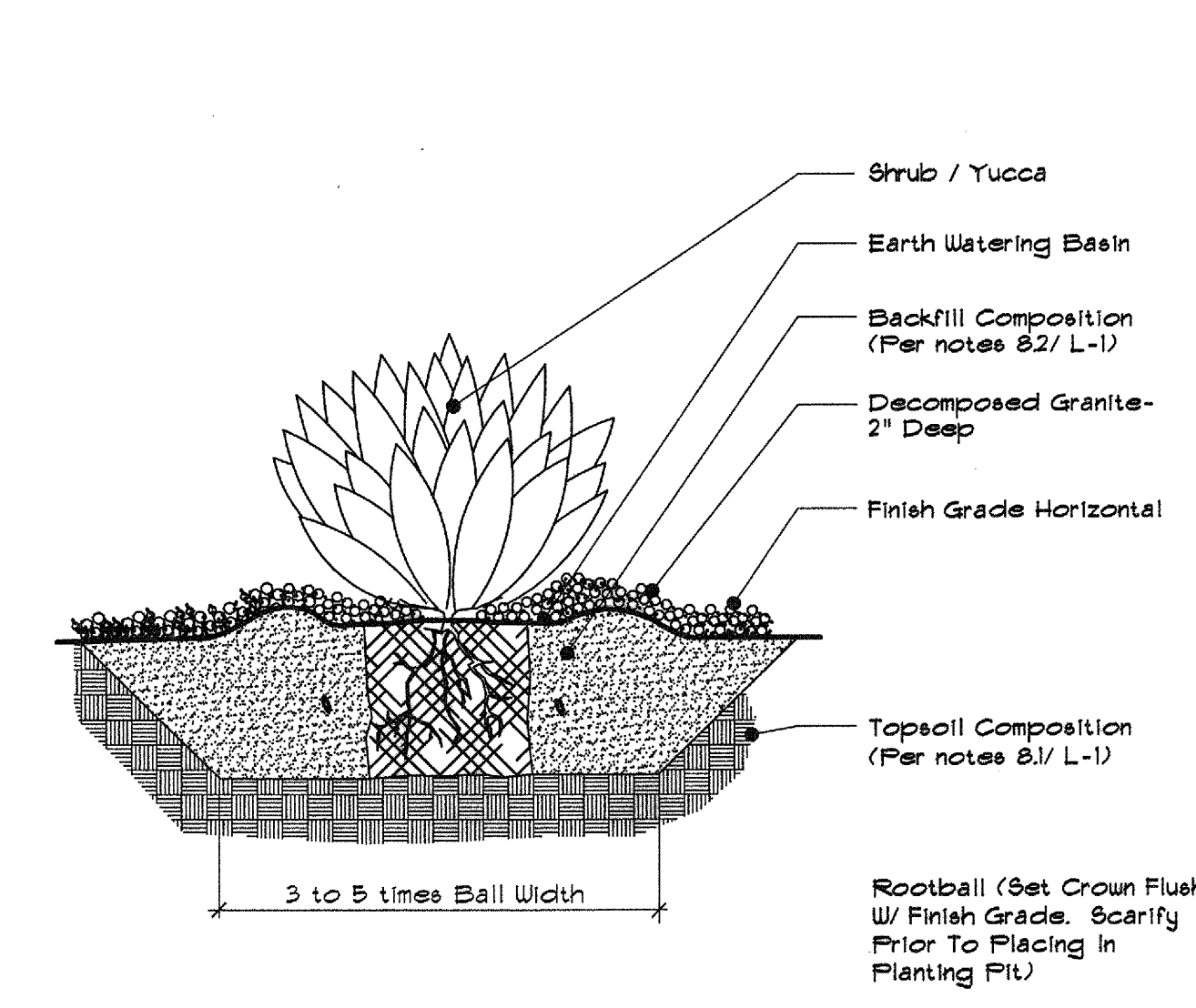
MANUFACTURERS:
DECOMPOSED GRANITE SOURCE:
MINERAL PARK DECORATIVE ROCK,
9376 E. WRIGHT DR. HC BOX 266
KINGMAN ARIZONA 86401 (702) 275-1371

3 Topsoil / Decomposed Granite
Scale: N.T.S.

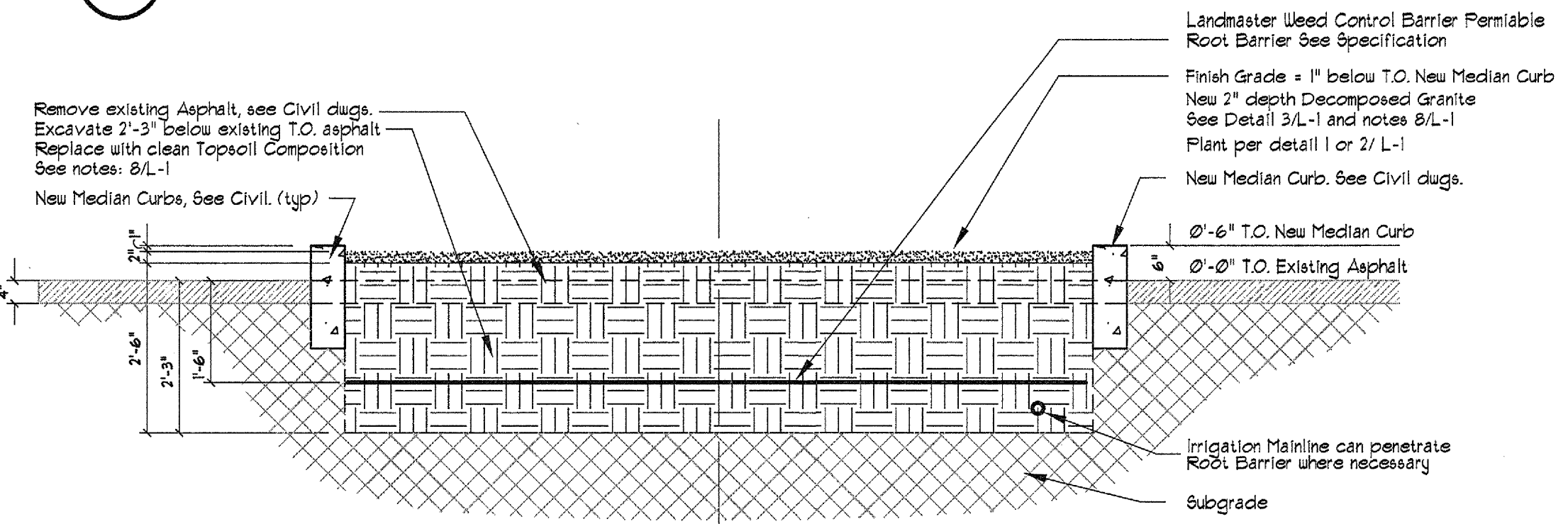


NOTE: Compact Subgrade to 80% And Apply A Preemergent Herbicide To The Soil Before Placing Granite At Required Depth. Rake Smooth Wet To Entire Depth. Roll With A 150lb Roller, Then Lightly Scarify Surface With A Leaf Rake. Keep Top Of Granite 1" Below Adjacent Walks, Curbs Or Other Hard Surfaces. Keep Preemergent application outside of plant basin area.

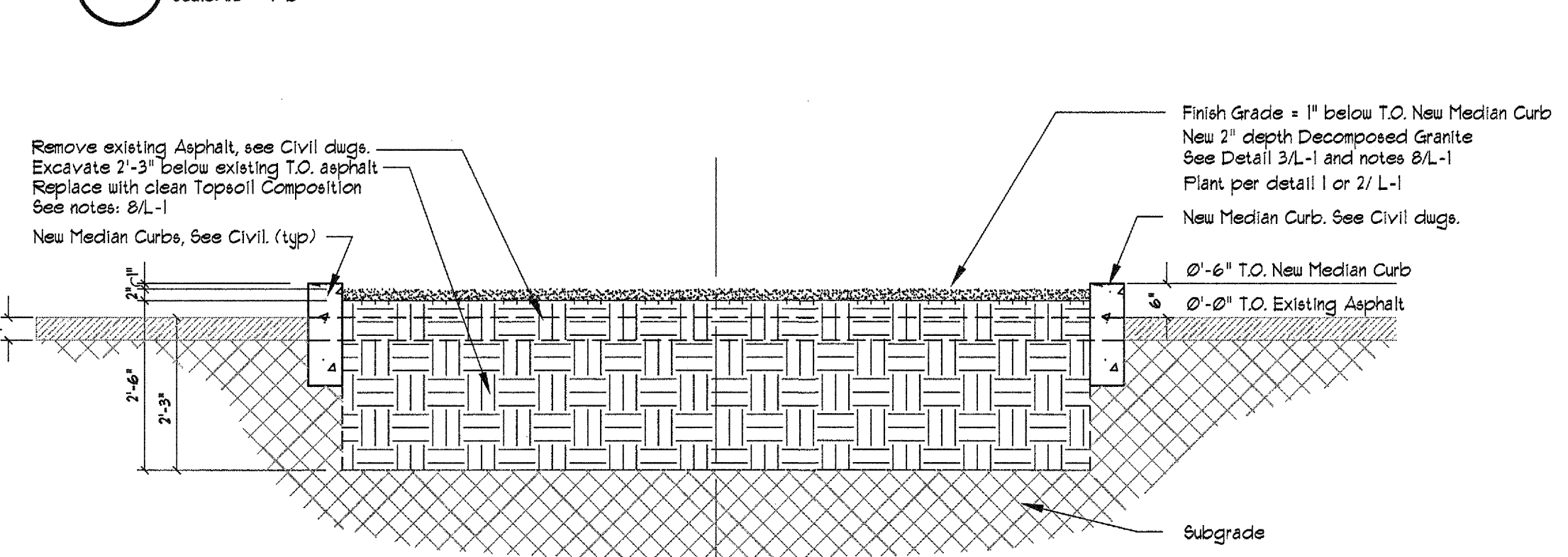
2 Shrub / Yucca Planting
Scale: N.T.S.



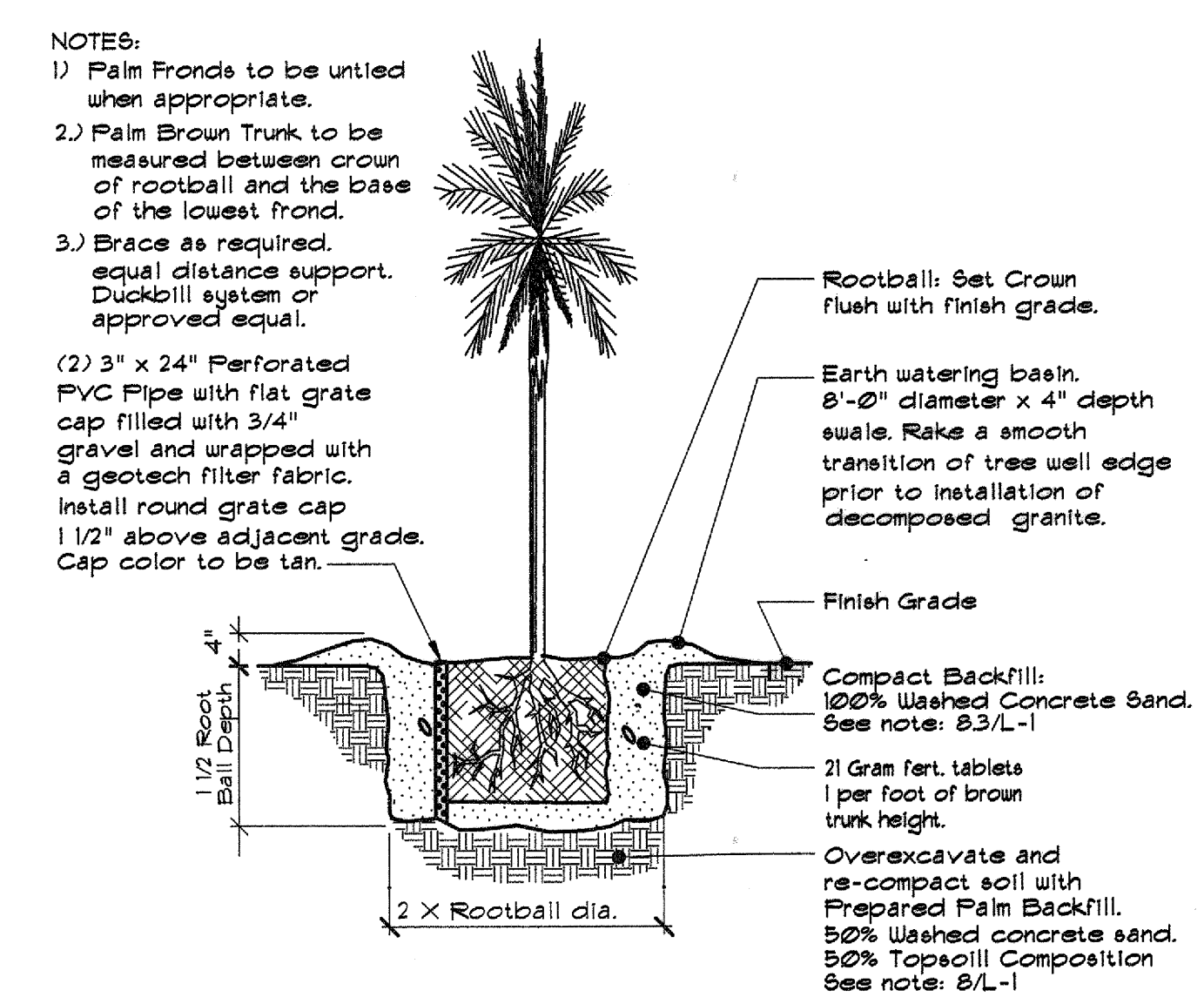
6 Section thru Median
Scale: 1/2" = 1'-0"



5 Section thru Planted Median w Root Barrier
Scale: 1/2" = 1'-0"



4 Section thru Planted Median
Scale: 1/2" = 1'-0"



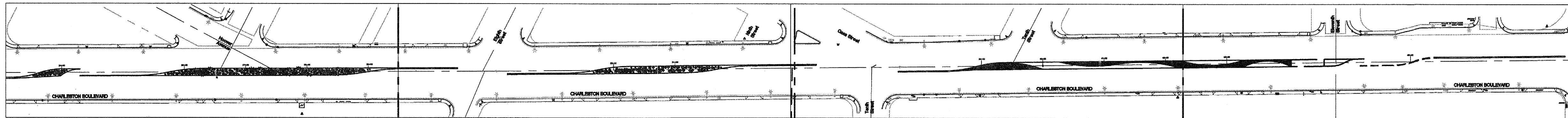
1 Canary and Date Palm Planting
Scale: N.T.S.

REVISIONS	NO.	DATE	DESCRIPTION

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DESIGN SECTION
CITY ENGINEER: DAVID BOWERS, P.E., P.T.O.E.
PROGRAM MANAGER: Mark Sorahan, P.E.
DESIGNED BY: mm
DRAWN BY: mm
CHECKED BY: L. Dunford P.E.
DATE: November 2013

TITLE: Charleston Boulevard Median Island Landscaping
SHEET: L-1
12 of 19
DRAWING NO. 107U5221

Sheet
L-1
12 of 19
DRAWING NO. 107U5221



Key Plan

Scale: 1" = 100'-0"

Sheet 1/L-2

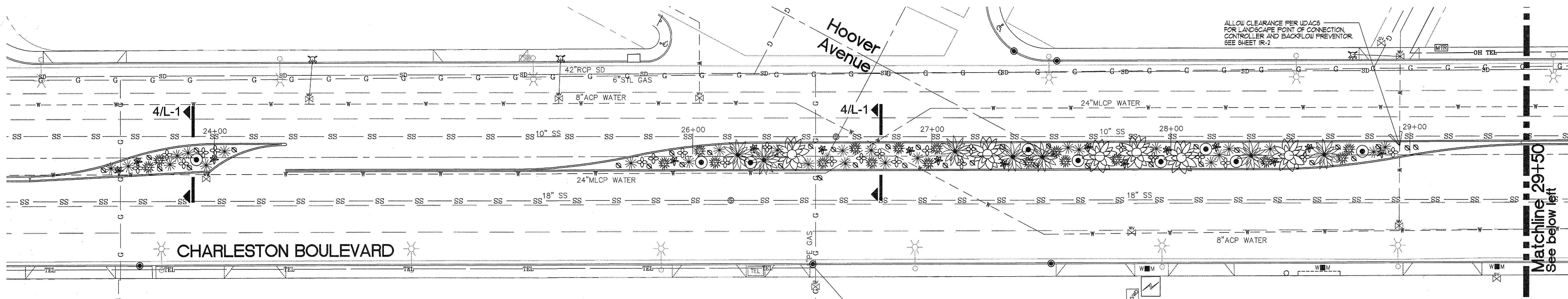
Sheet 2/L-2

Sheet 3/L-3

Sheet 4/L-3

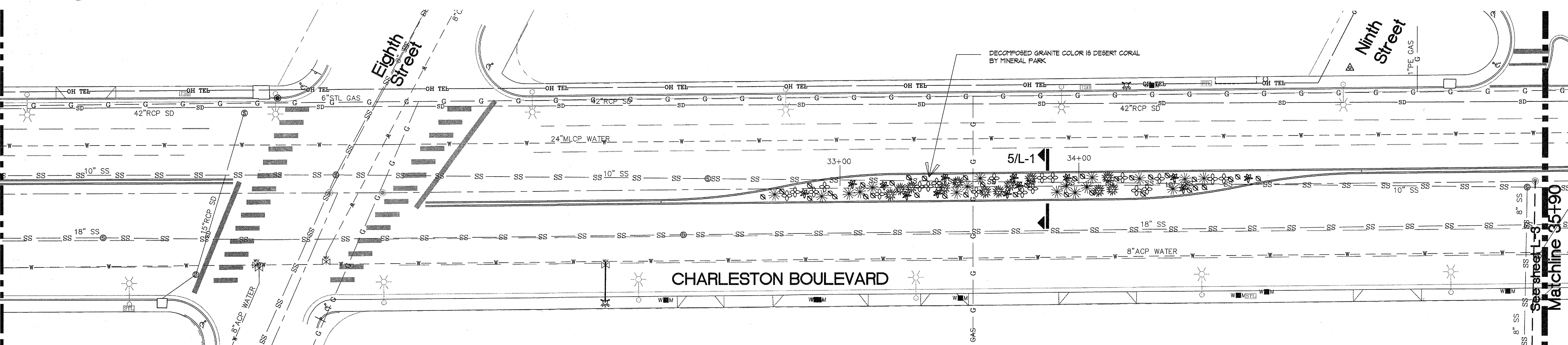
Plant Schedule

SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	WATER	QUANTITY
	CANARY ISLAND DATE PALM	PHOENIX CANARIENSIS 'PINEAPPLE TOP'	20' - 25' BROWN TRUNK HEIGHT	B-2 GPH	6
	CALIFORNIA DATE PALM	PHOENIX DACTYLIFERA	20' to 25' BROWN TRUNK HEIGHT	B-2 GPH	1
	BEAKED YUCCA	YUCCA ROSTRATA HYBRID	20' BOX	2-1 GPH	8
	RED YUCCA	HESPERALOE PARVIFLORA	9 GALLON	2-1 GPH	43
	PARROTCAINE	AGAVE COLORATA	9 GALLON	2-1 GPH	61
	DESERT SPOON	DASTYLIRION WHEELERI	9 GALLON	2-1 GPH	43
	AGAVE FEROX	AGAVE FEROX	9 GALLON	2-1 GPH	29
	GREEN DESERT SPOON	DASTYLIRION ACROTRICHUM	9 GALLON	2-1 GPH	30



1 Plan

Scale: 1" = 20'-0"



2 Plan

Scale: 1" = 20'-0"

REVISIONS

NO.	DATE	DESCRIPTION

DEPARTMENT OF PUBLIC WORKS

ENGINEERING DESIGN SECTION

DAVID BOWERS, P.E., P.T.O.E.
MARK SORESEN, P.E.
CITY ENGINEER
PROGRAM MANAGER

DESIGNED BY: mm
DRAWN BY: mm
CHECKED BY: L. Dunford P.E.

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: none
DATE: November 2013

Charleston Boulevard Median Island Landscaping

Planting Plan

"CH" 15+50 to "CH" 28+00

STATE OF NEW MEXICO

REGISTERED PROFESSIONAL ENGINEER

MARK SORESEN, P.E.

Exp: 12-31-15

CIVIL

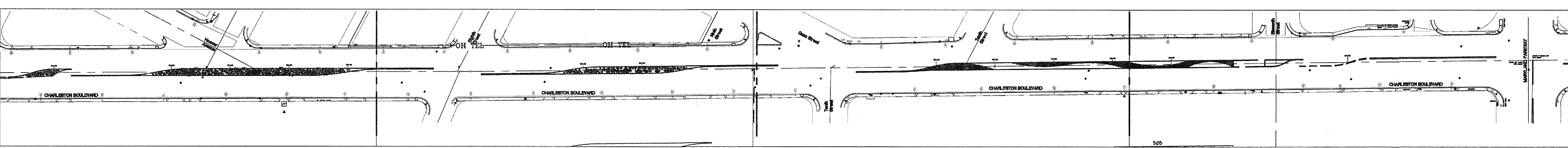
1-27-14

Sheet

L-2

13 of 19

DRAWING NO. 107V5221

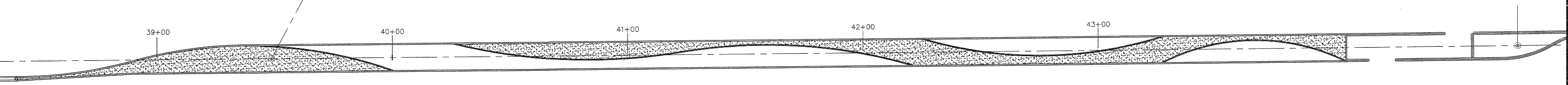


Key Plan Sheet 1/L-2
Scale: 1" = 100'-0"

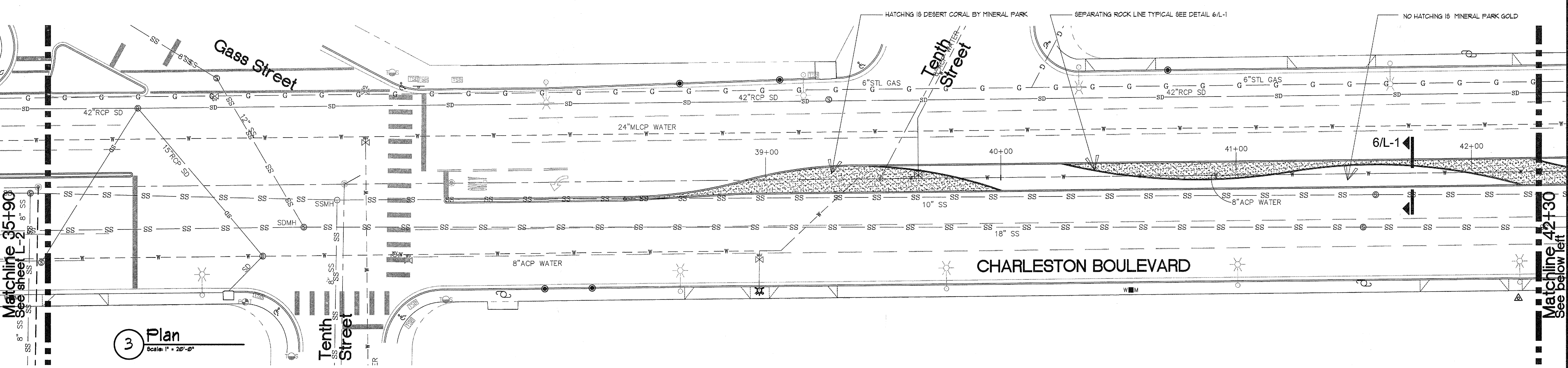
Sheet 2/L-2

Sheet 3/L-3

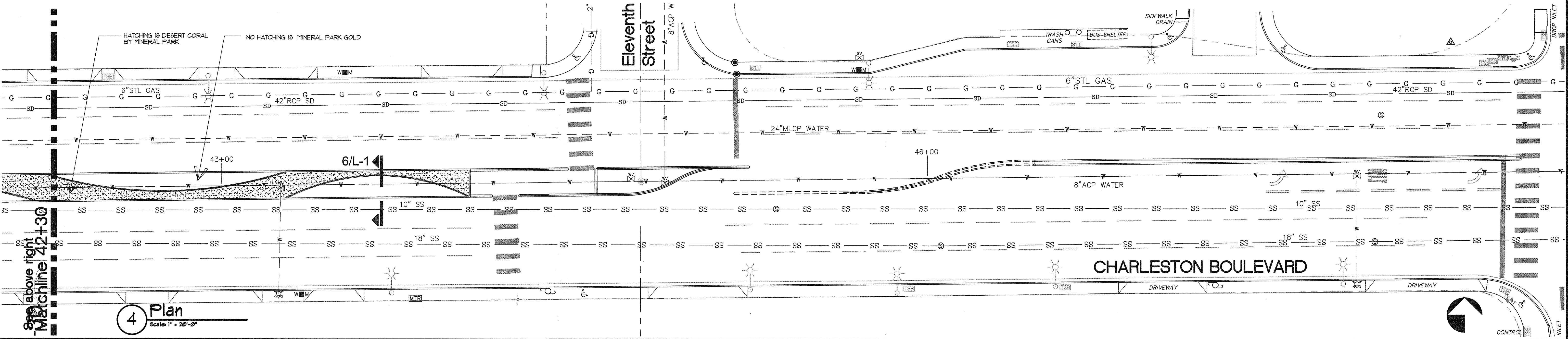
Sheet 4/L-3



5 Decomposed Granite Plan
Scale: 1" = 20'-0"



3 Plan
Scale: 1" = 20'-0"



4 Plan
Scale: 1" = 20'-0"

REVISIONS		NO.	DATE	DESCRIPTION	APP'D
NO.	DESCRIPTION				

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DESIGN SECTION

DAVID BOWERS, P.E., P.T.O.E.
Mark Soransen, P.E.
PROGRAM MANAGER:

DESIGNED BY: mm
DRAWN BY: mm
CHECKED BY: L. Dunford P.E.

HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: none
DATE: November, 2013

TITLE: Charleston Boulevard Median Island Landscaping

SHEET: L-3
14 of 19
DRAWING NO. 107U5221

Planting Plan
"CH" 28+00 + "CH" 38+00

THE NEW IRRIGATION SYSTEM FOR THE MEDIAN LANDSCAPE ALONG EAST CHARLESTON BOULEVARD, BETWEEN 6TH AND 11TH STREETS, WILL BE A FULLY AUTOMATED DRIP SYSTEM. SINGLE-OUTLET DRIP EMITTERS WILL IRRIGATE NEW PALM, SHRUB, AND GROUND COVER PLANTINGS WITHIN THE MEDIANS. EACH PLANTING CATEGORY WILL BE IRRIGATED USING SEPARATE LATERAL ZONES.

THE IRRIGATION CONTROL SYSTEM IS DESIGNED TO BE COMPATIBLE WITH THE CITY OF LAS VEGAS'S RAIN BIRD[®] MAXICOM COMPUTERIZED CENTRAL CONTROL SYSTEM. A NEW "SITE-SATELLITE" CONTROL UNIT WILL COMBINE TO OPERATE AS BOTH A CCU AND A SATELLITE CONTROLLER. 120 VAC POWER AND A DEDICATED CELLULAR TELEPHONE SERVICE ARE REQUIRED FOR DIRECT COMMUNICATION WITH THE OFF-SITE CENTRAL COMPUTER (SEE ELECTRICAL PLANS).

SLEEVES WILL BE INSTALLED BETWEEN MEDIANS TO TRANSITION MAINLINE PIPE AND LOW VOLTAGE WIRE. HORIZONTAL DIRECTIONAL BORING WILL BE REQUIRED FOR THE INSTALLATION OF SLEEVING UNDER THE EXISTING ROADWAY.

ISOLATION GATE VALVES WILL PERMIT THE ISOLATION OF SECTIONS OF THE SYSTEM FOR REPAIRS OR MAINTENANCE.

QUICK COUPLING VALVES ARE TO BE PROVIDED THROUGHOUT THE SITE FOR INCIDENTAL WATERING.

1. POINT-OF-CONNECTION: THE NEW SYSTEM DESIGN ASSUMES AN AVAILABLE STATIC PRESSURE OF APPROXIMATELY 65 P.S.I. AT THE 1-INCH POINT OF CONNECTION TO THE WASTEWATER MAIN. THE 1-INCH FLOW PREVENTER BASED UPON INFORMATION PROVIDED BY CITY OF LAS VEGAS ON 12/8/10. SYSTEM DESIGN ASSUMES A MAXIMUM FLOW RATE OF 20 GPM THROUGH THE 1-INCH SERVICE. THE CONTRACTOR MUST VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES WITH THE ASSUMPTIONS.

2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") FOR UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR GRAPHIC CLARITY. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS.
 - B. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT PERMITTED.
6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT (SEE ALSO SPECIFICATIONS):
 - A. TWO (2) SETS OF THE REQUIRED TOOLS FOR REMOVING, DISASSEMBLING AND ADJUSTING EACH TYPE OF EMITTER, DRIP VALVE ASSEMBLY, AND ELECTRONIC VALVE USED ON THE PROJECT.
 - B. TWO (2) KEYS FOR EACH CONTROLLER UNIT.
 - C. TWO (2) QUICK COUPLING KEYS WITH SWIVEL HOSE ATTACHMENT TO MATCH NOMINAL VALVE SIZE.
 - D. TWO OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE. PROVIDE PROPER LENGTH TO ACCESS VALVE, GATE VALVE HANDLE IS TO EXTEND THREE (3) FEET ABOVE FINISH GRADE.
 - E. ONE (1) HAND-HELD RADIO REMOTE TRANSCIVER COMPATIBLE WITH TRC REMOTE CONTROL SYSTEM.
7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE TO BE INSTALLED FOR BOTH PIPING AND ELECTRICAL WIRING AT HARDSCAPE CROSSINGS. SLEEVE INSTALLATION WILL REQUIRE HORIZONTAL DIRECTIONAL BORING FOR SLEEVE DIAMETER CAPABLE OF ACCOMMODATING OUTSIDE DIAMETER OF PIPE. REFER TO PLANS AND SLEEVE SIZING SCHEDULE FOR MINIMUM SLEEVE SIZE REQUIREMENTS. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES.
8. CONNECT ELECTRICAL POWER IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
9. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:
 - A. IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.

① POINT-OF-CONNECTION: COORDINATE WITH UTILITY CONTRACTOR FOR THE INSTALLATION OF 1-INCH DEDICATED TYPE K COPPER IRRIGATION STUB-OUT DOWNSTREAM OF WATER METER AND BACKFLOW PREVENTER (REFER TO CIVIL PLANS). MAKE CONNECTION TO STUB-OUT USING THE NECESSARY WROTE COPPER SOLDER JOINT FITTINGS AND CONTINUE ROUTING OF COPPER MAINLINE PIPE TO THE BACKFLOW PREVENTION ASSEMBLY AS SHOWN ON THE PLANS.

- ② FURNISH AND INSTALL NEW PEDESTAL MOUNT IRRIGATION "SITE-SATELLITE" CONTROLLER ASSEMBLY IN THE APPROXIMATE LOCATION INDICATED ON PLANS, 120 VAC ELECTRICAL POWER WILL BE PROVIDED AT THE NEW ASSEMBLY LOCATION BY ELECTRICAL SUB-CONTRACTOR (REFER TO ELECTRICAL DRAWINGS). COORDINATE EXACT LOCATION OF ELECTRICAL POWER SOURCE WITH THE ELECTRICAL DRAWINGS AND NECESSARY TRADES ON SITE. PROVIDE ALL REQUIRED CONDUITS AND CONDUCTORS BETWEEN ELECTRICAL POWER SOURCE AND IRRIGATION CONTROLLER AND MAKE CONNECTIONS PER THE NATIONAL ELECTRIC CODE. COORDINATE WITH OWNER'S REPRESENTATIVE FOR A DEDICATED CELLULAR TELEPHONE LINE FROM THE CITY OF LAS VEGAS PREFERRED CELLULAR PROVIDER FOR COORDINATION BETWEEN THE CENTRAL COMPUTER AND THE "SITE-SATELLITE" CONTROLLER. COORDINATE WITH CONTROLLER MANUFACTURER'S REPRESENTATIVE TO ENSURE PROPER COMMUNICATION BETWEEN THE CONTROLLER AND THE CENTRAL COMPUTER. COORDINATE EXACT PLACEMENT OF THE CONTROLLER PEDESTAL WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- ③ PROVIDE A SINGLE HORIZONTAL DIRECTIONAL BORE BETWEEN EACH MEDIAN. AT EACH MEDIAN CROSSING FURNISH AND INSTALL ONE (1) NEW 6-INCH HDPE, SDR-9 SLEEVE AND ONE (1) NEW 4-INCH HDPE, SDR-9 CONDUIT FOR THE TRANSITION OF IRRIGATION MAINLINE PIPE AND LOW VOLTAGE CONTROL WIRING FOR THE IRRIGATION SYSTEM. HDPE SLEEVES SHOULD BE INSTALLED WITH A MINIMUM RADIUS OF CURVATURE OF 7'8" TO ACCOMMODATE MANUFACTURER'S RECOMMENDATIONS FOR CURVATURE AND OFFSET OF MAINLINE PVC PIPE. HDPE SLEEVE/CONDUIT PIPE MUST BE A UNIFORM LENGTH OF PIPE FREE FROM FUSION WELDS. USE THE NECESSARY DRILLING MUD OR FLOW FILL TO FILL DRILLING VOID AROUND HDPE PIPES. REFER TO GENERAL NOTE #7 FOR ADDITIONAL INFORMATION. HDPE SLEEVE/CONDUIT PIPE MUST BE A UNIFORM LENGTH OF PIPE FREE FROM FUSION WELDS. REPAIR FINISH GRADE TO MATCH FINISH CONDITIONS SPECIFIED IN THE LANDSCAPE PLANS. COORDINATE WITH CITY OF LAS VEGAS REPRESENTATIVES AND THE APPROPRIATE SUB-CONTRACTORS DURING ROADWAY AND MEDIAN CONSTRUCTION REGARDING TIMING OF INSTALLATION FOR IRRIGATION PIPE SLEEVES AND WIRE CONDUITS BETWEEN EACH OF THE MEDIANS.
- ④ REMOTE CONTROL VALVE ASSEMBLY IS LOCATED AT THE END OF LOW VOLTAGE WIRE PATH. STUB-OUT TWO SPARE CONTROL WIRES AND ONE SPARE COMMON WIRE FROM RESPECTIVE IRRIGATION CONTROLLER TO THIS LOCATION FOR FUTURE USE IN THE EVENT OF CONTROL WIRE FAILURE. PROVIDE A 3-FOOT COILED LENGTH OF EACH SPARE WIRE IN ALL REMOTE CONTROL VALVE BOXES. ROUTE SPARE WIRES IN SAME TRENCH AS MAINLINE PIPE.
- ⑤ IRRIGATION PIPE AND VALVES MAY BE SHOWN OUTSIDE OF PLANTING AREA, PROPERTY BOUNDARIES OR IN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION COMPONENTS IN MEDIAN LANDSCAPED AREA.

MAINLINE PIPE SIZE (INCHES)	MINIMUM SLEEVE SIZE (INCHES)
1-1/2	6
2	6
LOW VOLTAGE WIRE	4

NOTE:
1. ALL SLEEVES ARE TO BE INSTALLED AT
THE CURRENT DEPTH OF MAINLINE.

LEGEND

SLEEVEING
*HDPE, SDR-9
*MINIMUM SIZE PER SLEEVE SIZING SCHEDULE

MAINLINE PIPE
*TYPE: SCHEDULE 40 PVC
*SIZE AS SHOWN

PALM EMITTER LATERAL PIPE
*TYPE: SCHEDULE 40 PVC
*1-INCH UNLESS OTHERWISE NOTED

SHRUB EMITTER LATERAL PIPE
*TYPE: SCHEDULE 40 PVC
*1-INCH UNLESS OTHERWISE NOTED

UNCONNECTED PIPE CROSSING

POINT-OF-CONNECTION (P.O.C.)

ISOLATION GATE VALVE ASSEMBLY
*NIBCO T113K OR EQUAL
*NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE

QUICK COUPLING VALVE ASSEMBLY
*RAIN BIRD 33-DNP
*SIZE: 3/4-INCH
*RAIN BIRD 33-DK QUICK COUPLING KEY WITH SH-0 SWIVEL HOSE CONNECTION

DRIP REMOTE CONTROL VALVE ASSEMBLY (SEE BELOW)
*REMOTE CONTROL VALVE: RAIN BIRD PEB OR EQUAL (SIZE: 1-INCH)
*FILTER: RAIN BIRD RBY-100MPTX-200MX OR EQUAL (SIZE: 1-INCH)
*PRESSURE REGULATOR: RAINBIRD PSI-M40X-100

DRIP FLUSH VALVE ASSEMBLY

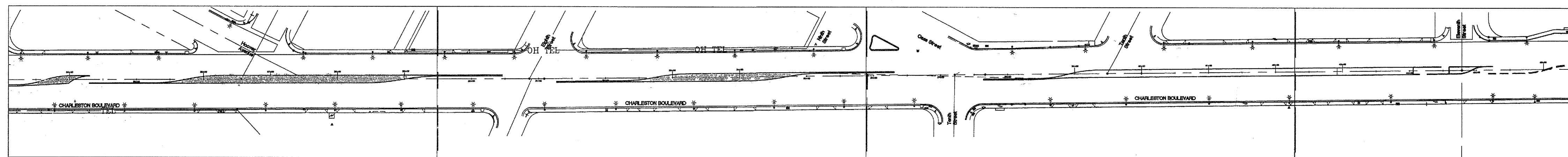
IRRIGATION "SITE-SATELLITE" CONTROLLER ASSEMBLY RAIN BIRD
ESP-12-SITE-SS-TE-CELLULAR-WH24-REM-GFI-AG2401-TRC-GROUNDING
12 STATIONS AVAILABLE, 5 STATIONS USED

A1	INDICATES CONTROLLER AND CONTROLLER STATION NUMBER
4	INDICATES LATERAL DISCHARGE IN GPM
1"	INDICATES REMOTE CONTROL VALVE SIZE IN INCHES
P	P=PALM EMITTER LATERAL S=SHRUB EMITTER LATERAL

VALVE BOXES
*BROOKS PRECAST OR EQUAL CONCRETE VALVE BOX WITH LOCKING METAL LID
*TYPE: REFER TO SPECIFICATIONS FOR TYPE PER ASSEMBLY

LOW VOLTAGE CONTROL, COMMON AND TRACING WIRE
*CONTROL WIRE: #14-1 AWG, SOLID COPPER, DIRECT BURY UF OR PE CABLE, COLOR: RED
*COMMON WIRE: #12-1 AWG, SOLID COPPER, DIRECT BURY UF OR PE CABLE, COLOR: WHITE W/ RED STRIPE
*TRACING WIRE: #12-1 AWG, SOLID COPPER, DIRECT BURY UF OR PE CABLE, COLOR: BLUE

LOW VOLTAGE WIRE SPLICES
*PRE-FILLED DRI-SPLICE WITH CRIMP SLEEVE
*3M DBR/Y OR APPROVED EQUAL



Sheet IR-2
Plan 1

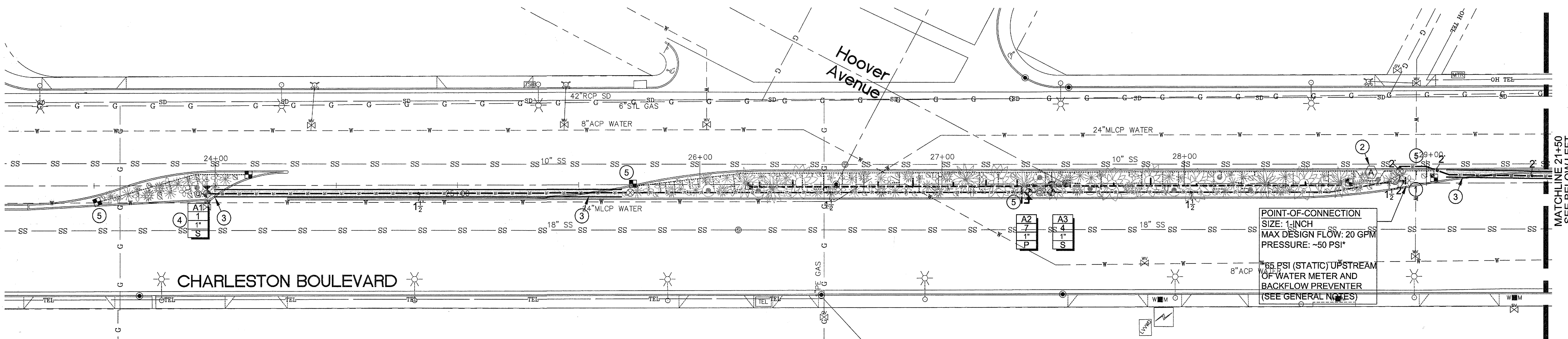
Key Plan

Scale: 1" = 100'-0"

Sheet IR-2
Plan 2

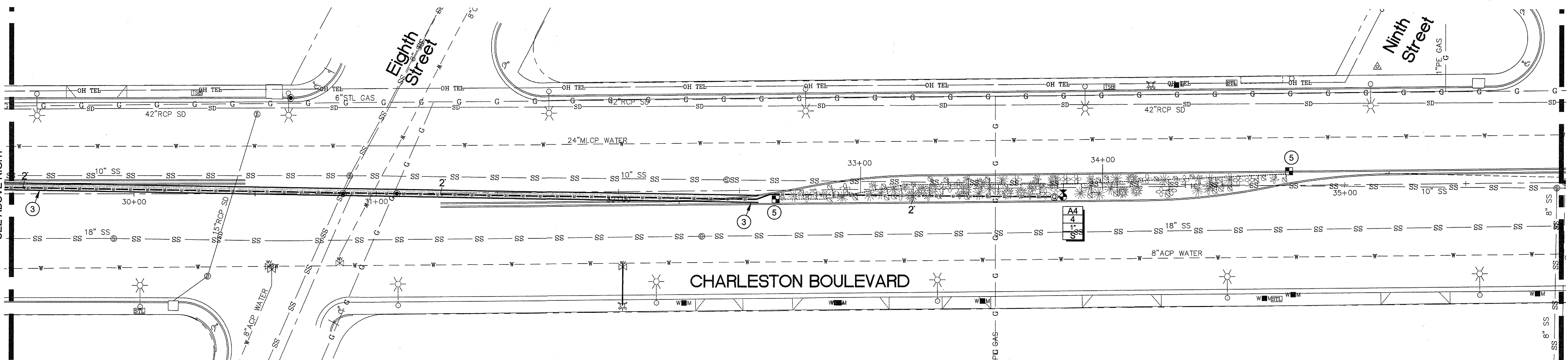
Sheet IR-3
Plan 3

Sheet IR-3
Plan 4



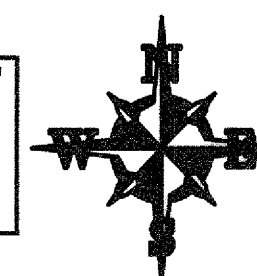
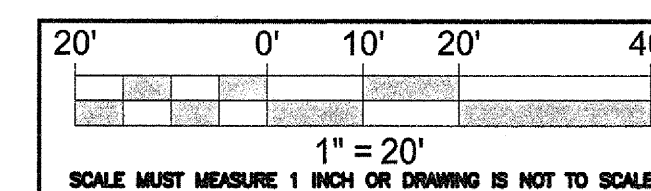
1 Plan

Scale: 1" = 20'-0"



2 Plan

Scale: 1" = 20'-0"



Aqua Engineering Inc.
Innovative Water Solutions

875 E. Homestead Road, Building 2-202
Fort Collins, CO 80525-4100
(970) 225-5000 office
(970) 225-5001 fax
www.aquaengineering.com

NO.	DATE	DESCRIPTION	APP'D

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DESIGN SECTION

CITY ENGINEER: DAVID BOWERS, P.E., P.T.O.E.
PROGRAM MANAGER: Mark Sorensen, P.E.

DESIGNED BY: SRS
DRAWN BY: SRS
CHECKED BY: DGM

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: DATE: November, 2013

Charleston Boulevard Median Island Landscaping

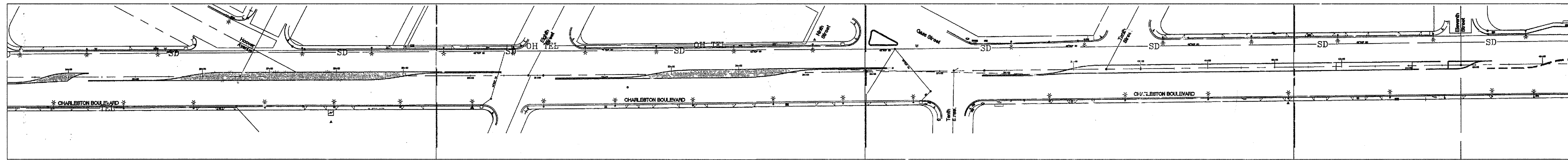
Irrigation Plan

"CH" 15+50 to "CH" 28+00

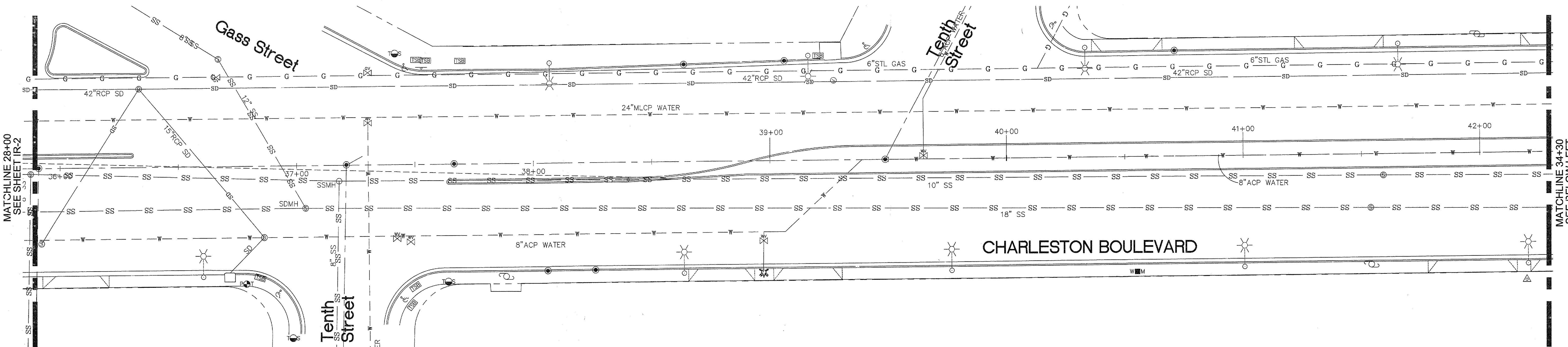
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Sheet **IR-2**
16 of 19
DRAWING NO. 107V5221

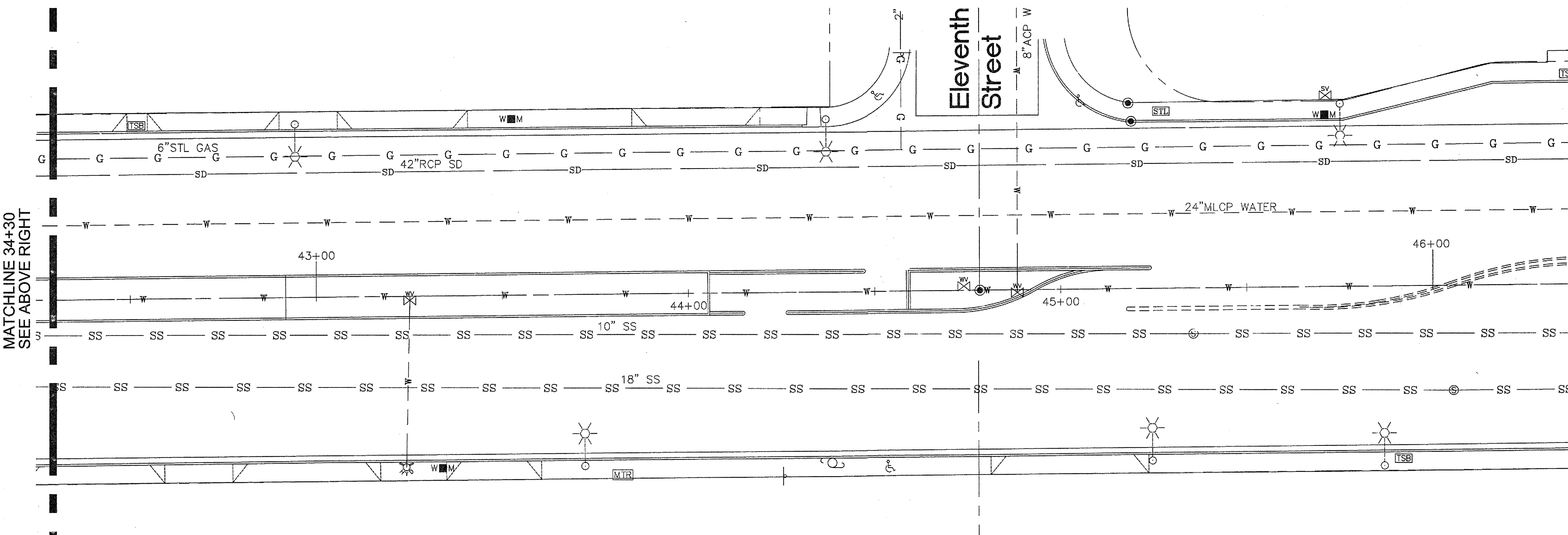
PROFESSIONAL ENGINEER - STATE OF COLORADO
LARRY DUNFORD
Exp. 12-31-15
CIVIL
No. 19107



Key Plan
Scale: 1" = 100'-0"

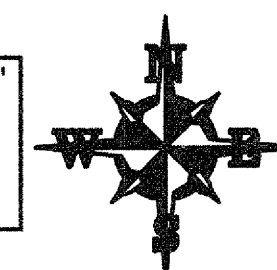
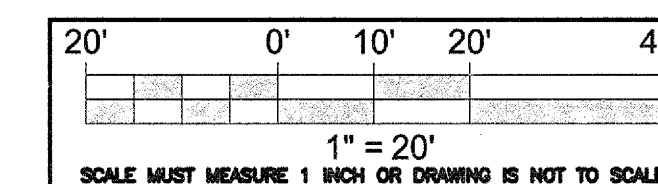


3 Plan
Scale: 1" = 20'-0"



4 Plan
Scale: 1" = 20'-0"

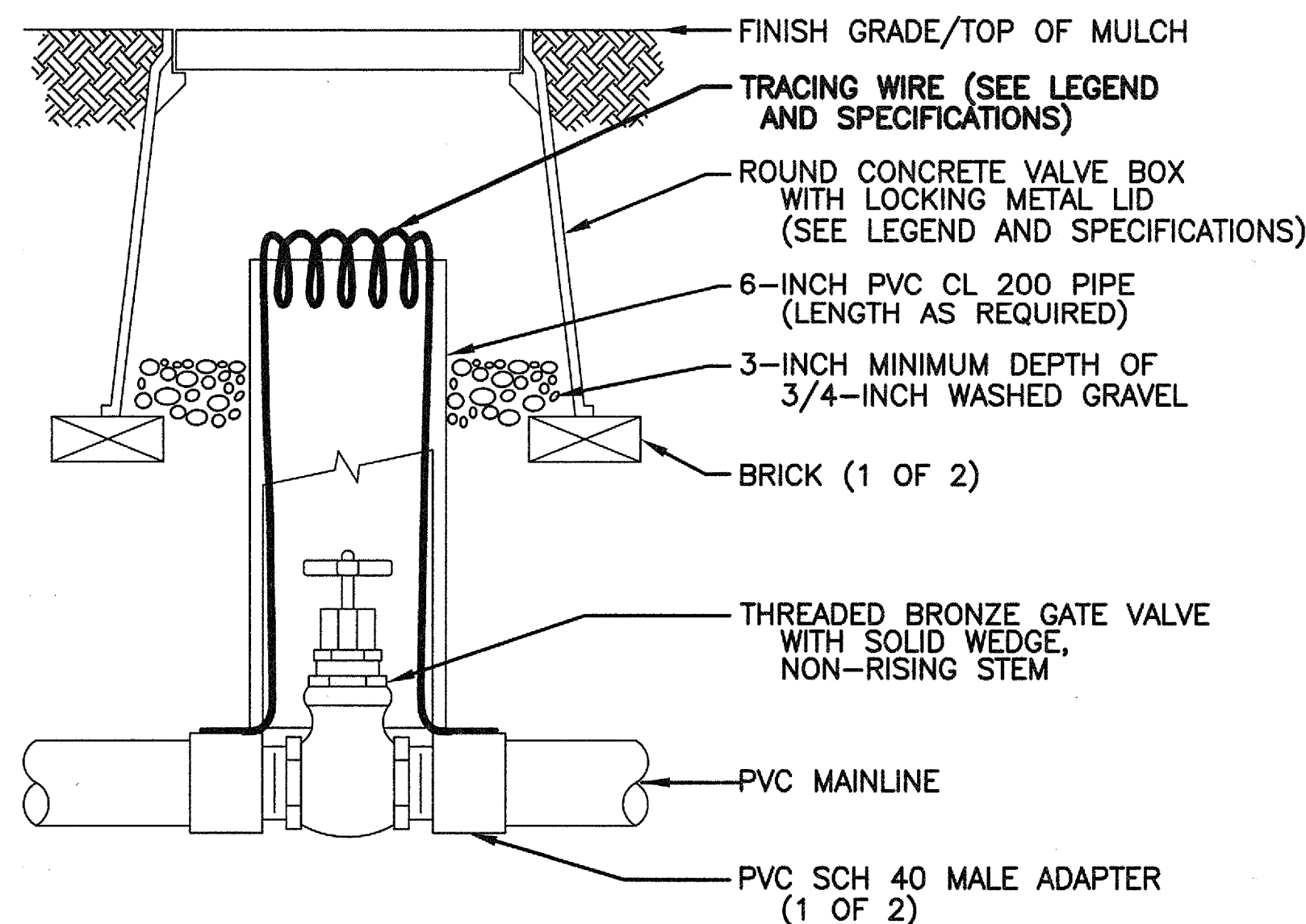
No Irrigation Work on this Median



Aqua Engineering Inc.
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970.225.3895 fax
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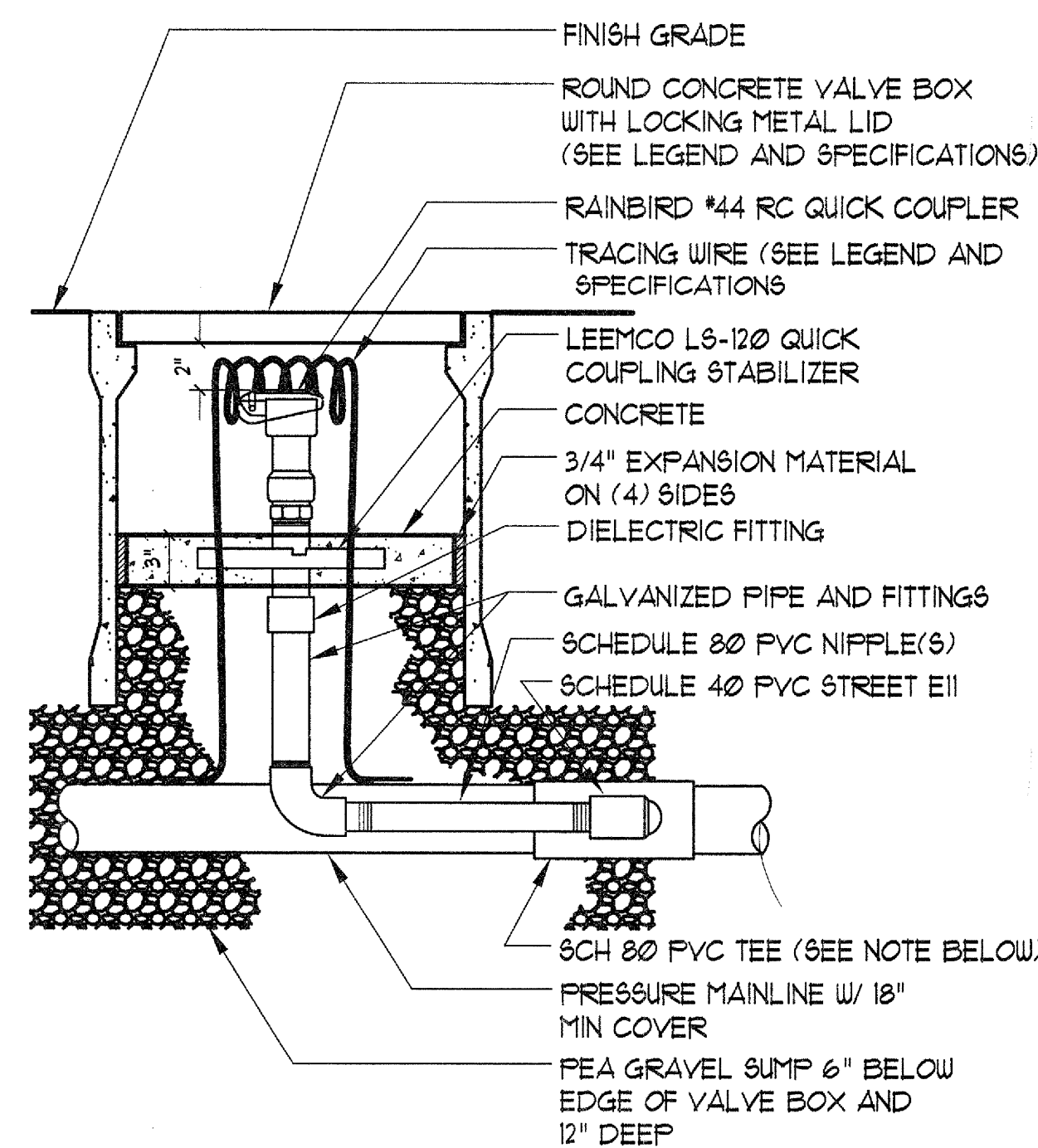
DEPARTMENT OF PUBLIC WORKS ENGINEERING DESIGN SECTION		CITY ENGINEER: DAVID BOWERS, P.E., P.T.O.E. MONT SORSENSEN, P.E.	DESIGNED BY: SRS DRAWN BY: SRS CHECKED BY: DGM	HORIZONTAL SCALE: 1"=20'-0" VERTICAL SCALE: DATE: November, 2013	NO. DATE: APP'D DESCRIPTION
TITLE: Charleston Boulevard Median Island Landscaping		SHEET: IR-3 17 of 19 DRAWING NO. 107V5221			



NOTE:
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.

1 ISOLATION GATE VALVE ASSEMBLY

N.T.S.

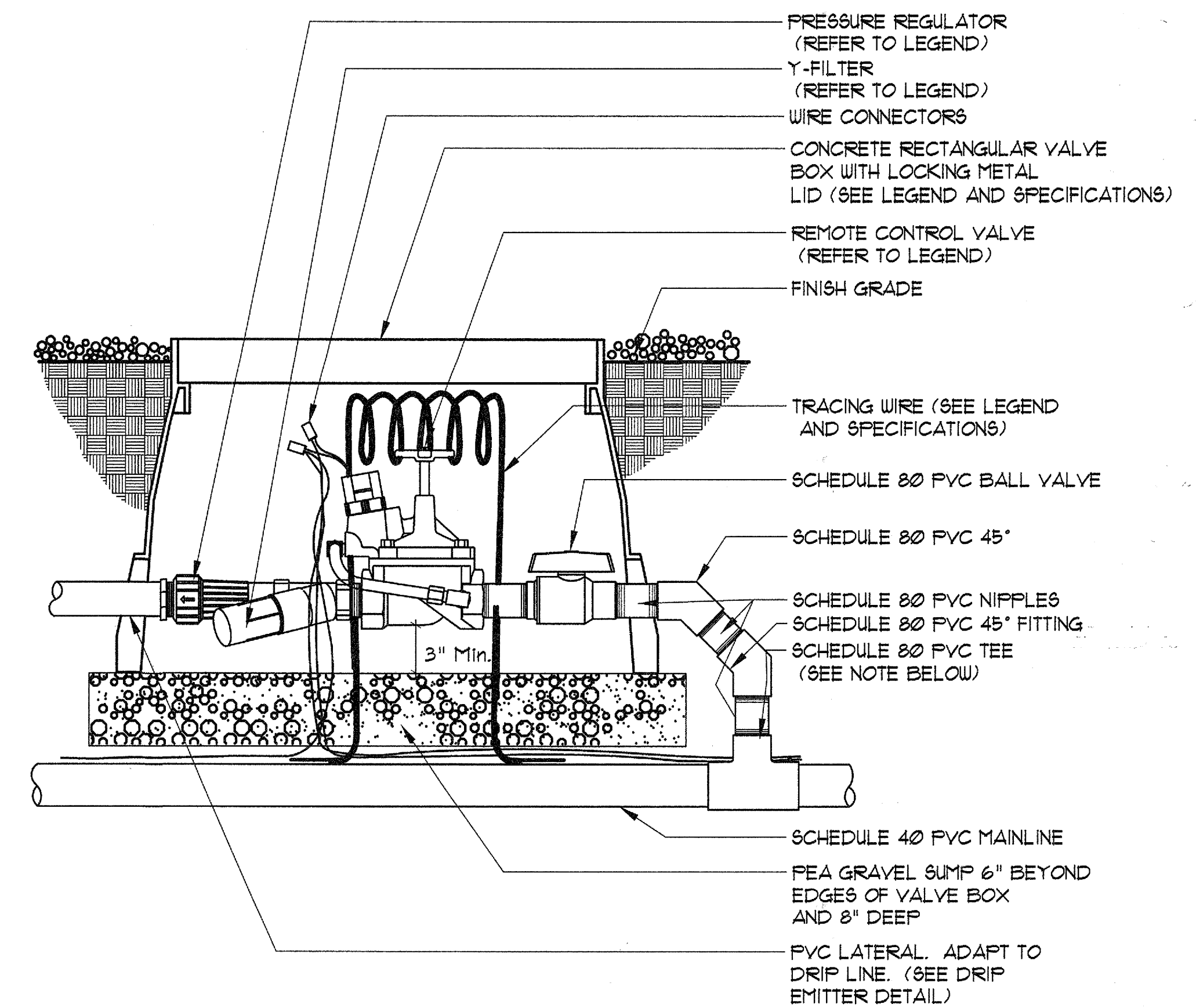


NOTE:
1. FOR MAINLINE SIZES 3" AND LARGER REPLACE SCHEDULE 80 PVC TEE WITH DUCTILE IRON, GASKETED TEE PER THE SPECIFICATIONS.

2 QUICK COUPLING VALVE ASSEMBLY

CITY OF LAS VEGAS DETAIL

N.T.S.



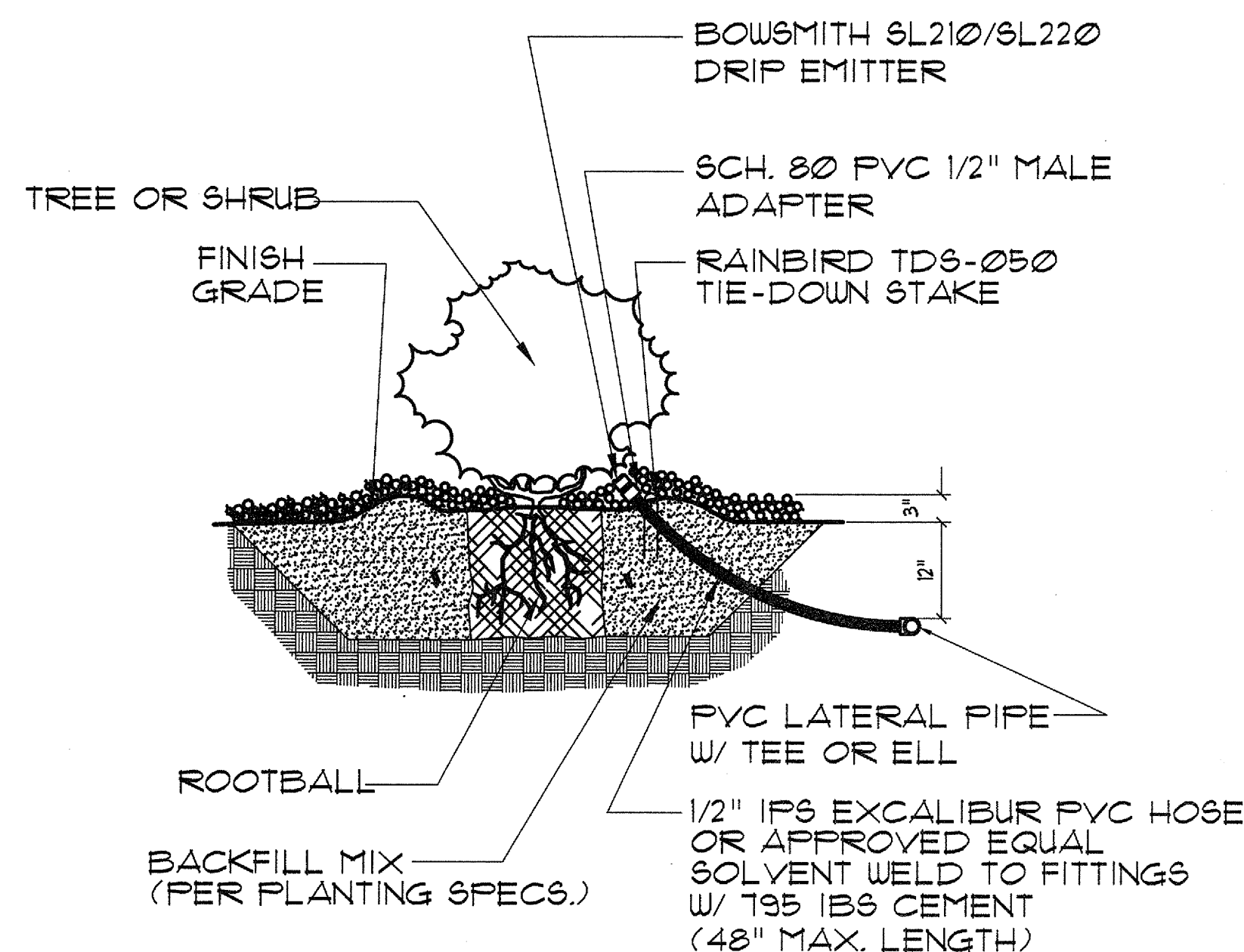
3 DRIP REMOTE CONTROL VALVE ASSEMBLY

CITY OF LAS VEGAS DETAIL

N.T.S.

PLANT SIZE	QTY	GPH.
5 GAL.	2	1

NOTE:
INSTALL EMITTERS ON THE UPHILL SIDE OF THE ROOTBALL AT SLOPE LOCATIONS. EQUALLY SPACE THE REQUIRED NUMBER OF EMITTERS AROUND THE PERIMETER OF THE TREE OR SHRUB. (AT EDGE OF ROOTBALL)

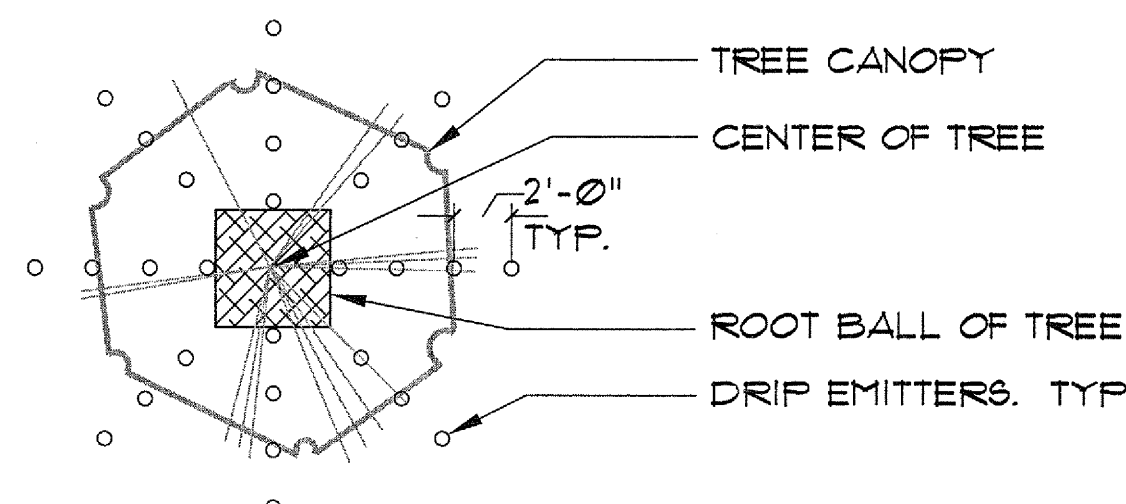


4 DRIP EMITTER ASSEMBLY

CITY OF LAS VEGAS DETAIL

N.T.S.

NOTES:
1. THIS IS A SUGGESTED EMITTER LAYOUT PLAN. ACTUAL LAYOUT MAY VARY DEPENDING ON SURROUNDING FEATURES. THE INTENT IS TO PROVIDE WATER FOR FUTURE ROOT GROWTH.
2. ADJACENT TREES AND SHRUBS MAY SHARE THE SAME EMITTER WHERE PATTERNS OVERLAP.
3. BEGIN PLACEMENT OF EMITTERS ADJACENT TO ROOT BALL OF THE TREE AND WORK OUTWARD IN ALL DIRECTIONS UNTIL THE REQUIRED NUMBER OF EMITTERS IS OBTAINED. WHERE LARGE TREES ARE INSTALLED IN NARROW PLANTERS REDUCE THE QUANTITY OF EMITTERS TO FIT THE SPACE. 4'-0" SQUARE PLANTERS ONLY NEED FOUR EMITTERS. KEEP ALL EMITTERS 18" FROM ANY CURB, WALK OR OTHER PLANTER EDGE AND 36" FROM ANY BUILDING OR STRUCTURE.

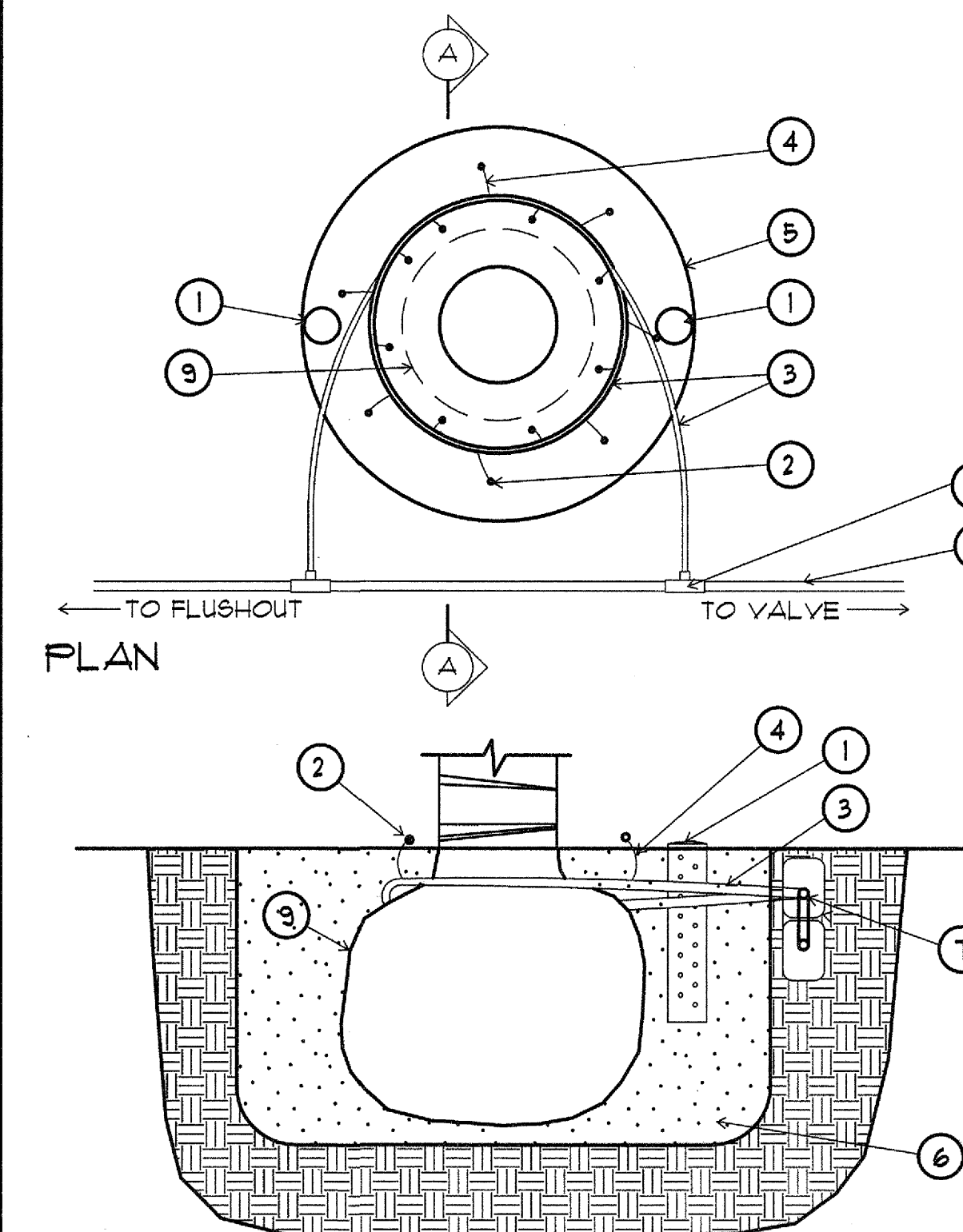


TREE SIZE	QUANTITY	GPH
24" BOX	8	2
36" BOX	10	2

5 TYPICAL EMITTER LAYOUT FOR TREES

CITY OF LAS VEGAS DETAIL

N.T.S.



SECTION AA TYPICAL PALM DRIP LAYOUT ASSEMBLY

PLANT TYPE	QUANTITY	GPH
CANARY PALM	10	2
DATE PALM	10	2

- 3' x 24' PERFORATED PVC PIPE WITH FLAT GRATE CAP FILLED WITH 3/4" GRAVEL AND WRAPPED WITH A GEOTECH FILTER FABRIC (1 OF 2). INSTALL ROUND GRATE CAP 1/2" ABOVE GRADE. CAP COLOR: TAN.
- EMITTER: BOWSMITH (SEE SPECIFICATIONS). MALE ADAPTER IS SOLVENT WELDED TO 1/2" EXCALIBUR FLEXIBLE PVC HOSE. FEMALE EMITTER IS SCREWED ON. PLACE EMITTERS A MINIMUM OF 6" AWAY FROM ROOTBALL WITHIN DRIPLINE OF TREE. (SEE EMITTER QUANTITIES).
- DRIP SUB-LATERAL PIPE: 1/2" EXCALIBUR FLEXIBLE PVC HOSE WITH SOLVENT WELD TO FITTINGS USING T95 IBS CEMENT.
- DRIP DISTRIBUTION PIPE: 1/2" EXCALIBUR FLEXIBLE PVC HOSE WITH SOLVENT WELD TO FITTINGS USING T95 IBS CEMENT.
- PLANT PIT.
- BACKFILL MATERIAL (SEE PLANTING DETAILS).
- PVC LATERAL PIPE.
- PVC TEE.
- PALM TREE ROOTBALL.

6 TYPICAL PALM DRIP LAYOUT ASSEMBLY

CITY OF LAS VEGAS DETAIL

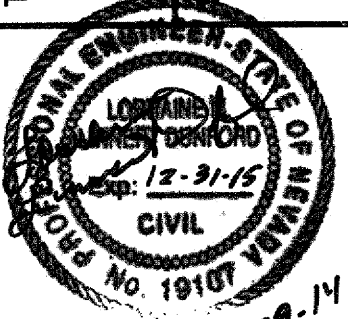
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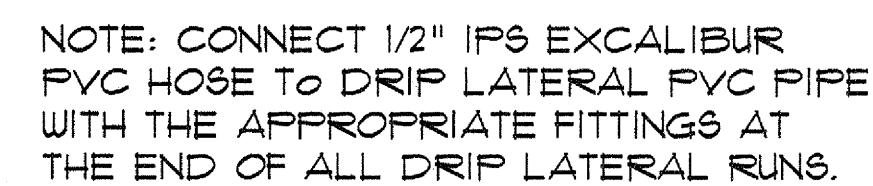
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Sheet
IR-4
18 of 19
DRAWING NO.
107V5221

TITLE: Charleston Boulevard Median Island Landscaping
Irrigation Details
"CH" 15+50 + "CH" 38+00



DEPARTMENT OF PUBLIC WORKS
ENGINEERING DESIGN SECTION
CITY ENGINEER: CHERI EDELMAN, P.E.
PROGRAM MANAGER: Mark Sorenson, P.E.
DESIGNED BY: SRS
DRAWN BY: SRS
CHECKED BY: DGM
DATE: 28-Jun-14
HORIZONTAL SCALE:
VERTICAL SCALE:
NO. DATE: 28-Jun-14
APP'D



CITY OF LAS VEGAS DETAIL N.T.S.



- CONTRACTOR TO GROUND AND PROVIDE SURGE PROTECTION FOR FIELD UNIT IN ACCORDANCE W/ MANUF. RECOMMENDATIONS AND GROUND ROD SHOWN (SEE DETAIL). CONTRACTOR SHALL INSTALL A 20A NON-FUSED DISCONNECT AND 120V DUPLEX RECEPTACLE INSIDE PEDESTAL.
- INSTALL CONTROLLER PER MFG. PRINTED INSTRUCTIONS AND PER LOCAL CODES. LOCATION SHOWN ON DRAWINGS OR APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

CITY OF LAS VEGAS DETAIL N.T.S.

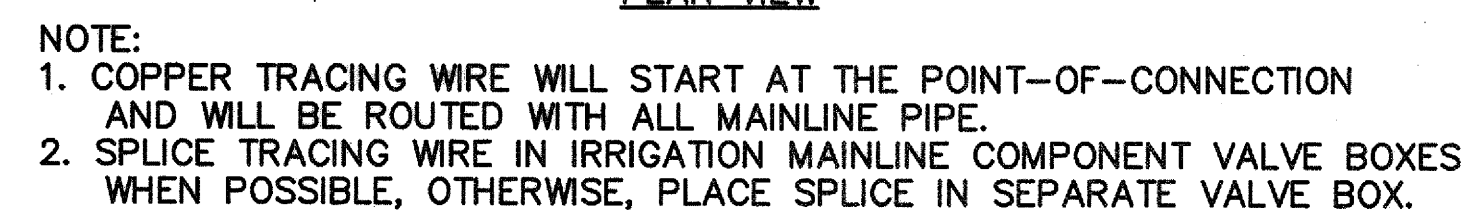


RODS MUST BE COPPER
OR SOLID BRASS

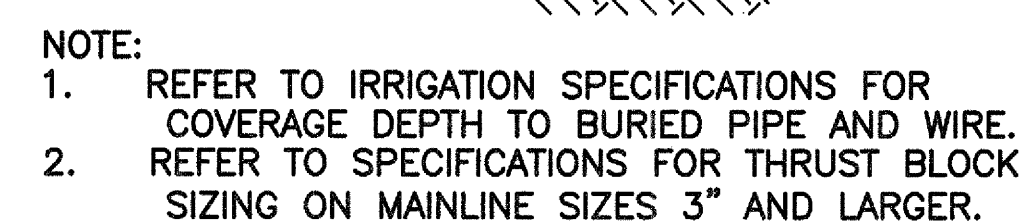
PLAN VIEW



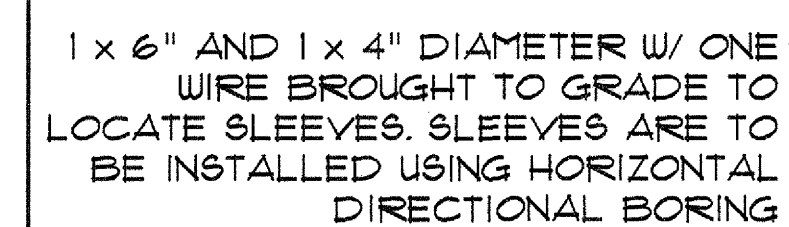
CITY OF LAS VEGAS DETAIL N.T.S.



N.T.S.



N.T.S.



MODIFIED CITY OF LAS VEGAS DETAIL N.T.S.

F:\#DEPOT\CITY_ENGINEER\ENG_DESIGN\DESIGN\DESIGN\23870\DWG\CHARLESTONMEDIANLANDSCAPING-100%_1_6_14.DWG

- # CITY OF LAS VEGAS STREET LIGHTING NOTES
-
1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION.
 2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE UNIFORM STANDARD SPECIFICATIONS.
 3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
 4. ALL EMPTY CONDUIT SHALL HAVE PULL STRINGS AND A #8 AWG TRACER WIRE INSTALLED PER SECTION 623 G.02.01 OF THE SPECIFICATIONS PRIOR TO BACKFILLING AND FINAL INSPECTION.
 5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN COMPLIANCE WITH USD NO. 320A WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
 6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
 7. SERVICE POINTS SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT OR AS SHOWN ON THE PLANS.
 8. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS OR IN THE SPECIAL PROVISIONS.
 9. ALL STREET LIGHTING AND TRAFFIC SIGNAL EQUIPMENT REMOVED AND / OR DESIGNATED TO BE SALVAGED SHALL BE DELIVERED BY THE CONTRACTOR TO THE APPROPRIATE CLV SERVICE YARD WITH A MEANS TO UNLOAD. A MINIMUM 24-HOUR NOTICE OF DELIVERY IS REQUIRED. CALL 229-6331 TO SET UP DELIVERY TIME AND LOCATION. REPAIR OF ANY DAMAGE TO EQUIPMENT DURING THIS PROCESS WILL BE THE CONTRACTOR'S RESPONSIBILITY, AT NO ADDITIONAL COST TO THE CITY.

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.

3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENVOYEMENTS AND EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.

4. WHEN A DESIGNATED "SUGGESTED ROUTE TO SCHOOL" IS ENCOACHED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.

5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL BE FABRICATED WITH DIAMOND GRADE PIV CLASS 6 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1150 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARDS SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.

7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.

8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.

9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.

10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.

11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.

13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY THE CITY AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.

14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.

15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKING AND SIGNING WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

REVISED 05/05/2008

CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.

3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNWARRANTED COLLAPSE OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.

4. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.

5. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL
A. PAVEMENT AREA SUBGRADE	0.1"±	+0.0" TO -0.1"
B. ENGINEERED FILL	0.5"±	+0.1" TO -0.1"

COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE. COMPACTION SHALL COMPLY WITH THE REQUIREMENTS OF THE ENGINEER.

6. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.

7. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.

8. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.

9. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, SUCH ITEM SHALL BE PROVIDED, AS DIRECTED BY THE CITY ENGINEER, AT NO EXPENSE TO THE CITY OF LAS VEGAS. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

REV. DATE JULY 2008

LVVWD PROJECT # 116055

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-0772) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT'S IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES SHALL BE PAVED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600
14. THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF A" APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ADJACENT TO A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OF OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY GIVEN DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

APPROVED FOR CONSTRUCTION

Wardhead

Las Vegas Valley Water District Engineering Services Manager

Project No. 116055

Date: 02/04/14

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS, SPECIFICATIONS, AND CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY PLANNING ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SD-35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (7') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS. WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY PLANNING ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWERS REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

RTC NOTES

1. THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE TWO CONSECUTIVE BUS STOPS ON THE SAME SIDE OF THE STREET. TEMPORARY CLOSURES SHALL BE PWD (PERSON'S WITH DISABILITY) ACCESSIBLE. BEFORE ANY BUS STOP CAN BE CLOSED, THE CONTRACTOR SHALL NOTIFY REX FOGLEMAN AT (702) 400-9975 FOR APPROVAL A MINIMUM OF 48 HOURS IN ADVANCE.
2. THE CONTRACTOR SHALL PROVIDE A BUS STOP CLOSURE SCHEDULE (BSCS) WITH THE TRAFFIC CONTROL PLAN. THE BSCS SHALL IDENTIFY SPECIFIC DURATION AND TIMES OF DAY FOR ALL PROPOSED BUS STOP CLOSURES. BUS STOP CLOSURES ARE NOT TO EXCEED TWO CONSECUTIVE BUS STOPS AT A TIME OR 1,000 FEET AT A TIME. PERSONS WITH DISABILITIES SHALL HAVE ACCESS TO BUS STOPS. THE CONTRACTOR SHALL PROVIDE A 100 FEET LONG X 10 FEET WIDE GRAVELED TURN OUT AT BUS STOPS.

Call before you Dig
to avoid cutting or hitting
utility lines. It's costly.

or
1-800-227-2600
DOWNSIDE
1-702-465-7544

Avoid disturbing overhead
utility lines. It's costly.

Call
before you
do Overhead
1-702-593-6111
OVERHEAD SERVICE ALERT

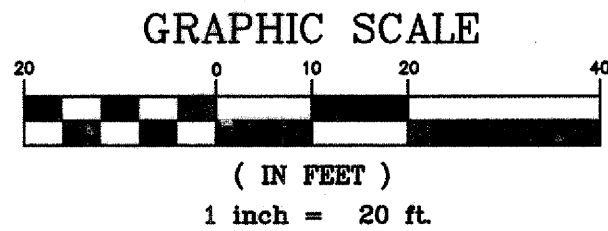
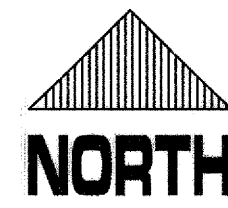
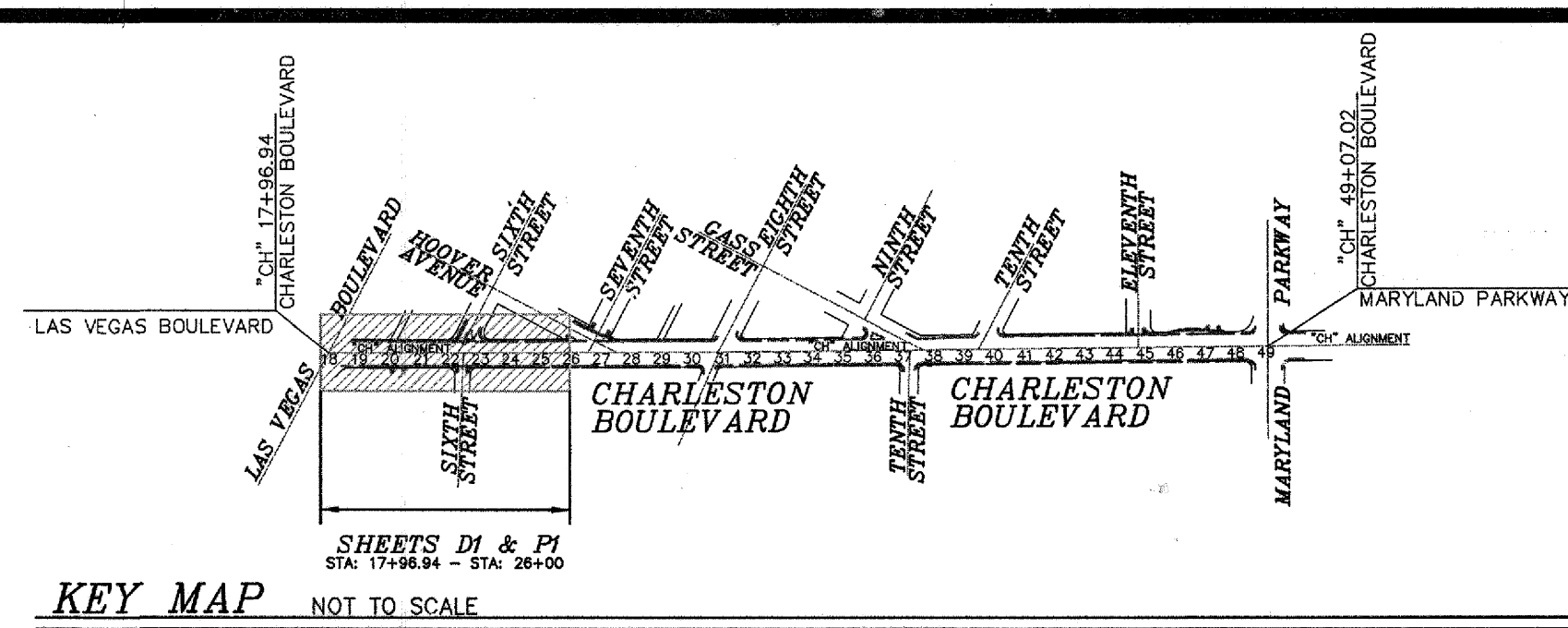
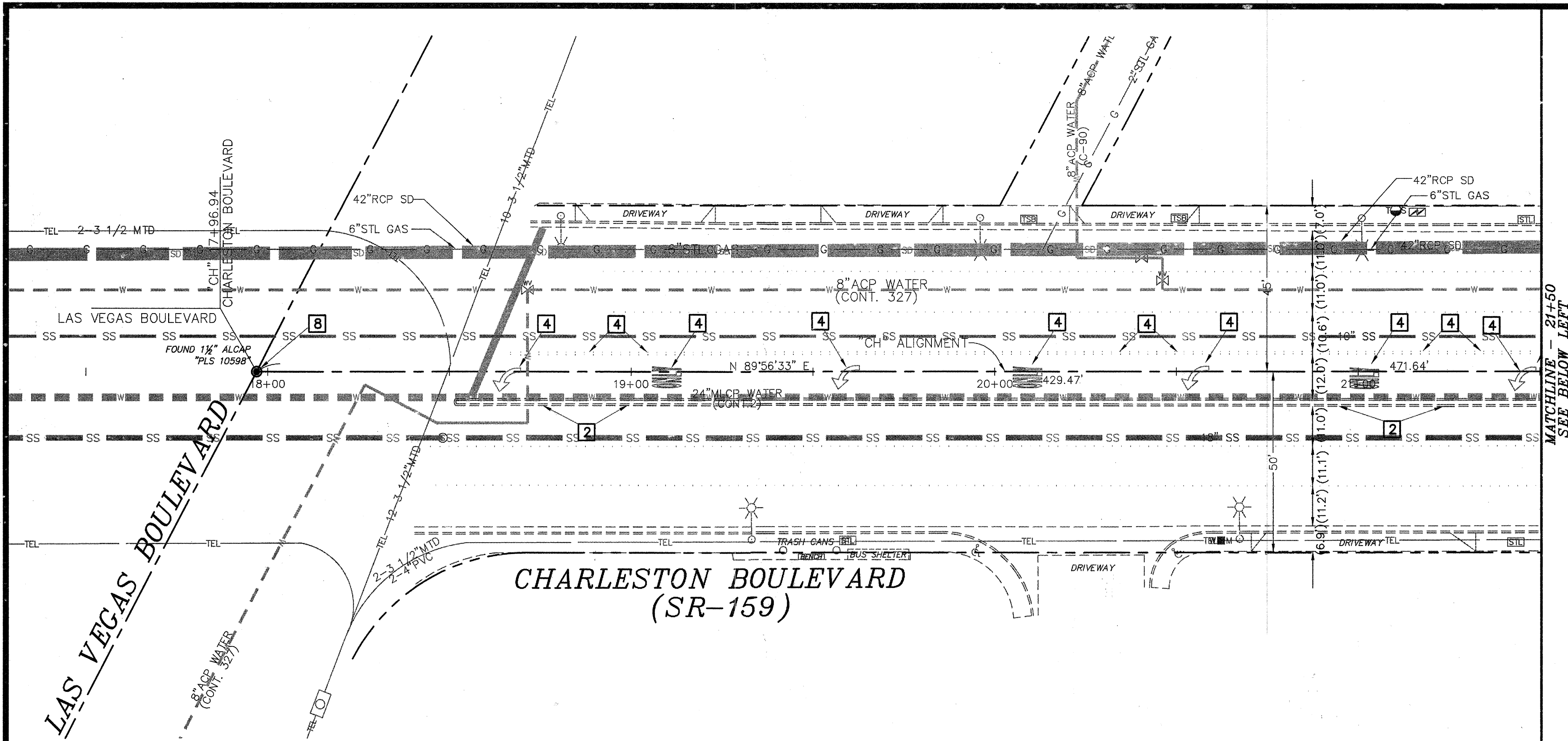
Call
before you
go Under Ground
1-702-455-7511
CLARK COUNTY TRAFFIC DIVISION
1-702-229-6611
LAS VEGAS AND CLARK COUNTY TRAFFIC DIVISION

BASIS OF BEARINGS N 89°21'52" E, BEING THE CENTERLINE OF CHARLESTON BOULEVARD BETWEEN THE NORTH 1/4 CORNER OF SECTION 3 AND THE NORTH-EAST CORNER OF SECTION 3, AS SHOWN ON A RECORD OF SURVEY, RECORDED IN BOOK 177, PAGE 4 OF SURVEYS, OFFICIAL RECORDS. CLARK COUNTY, NEVADA.	
BENCHMARK CITY OF LAS VEGAS BM "CHASS": RIVET & PLATE IN TOP OF CURB, NORTHEAST CORNER OF CHARLESTON BOULEVARD AND LAS VEGAS BOULEVARD. ELEVATION: 2019.57 (NAVD88)	
GRAPHICS LEGEND:	
SAWCUT LINE	
TYPE "A" ISLAND CURB	
3" STEEL SLEEVE	
LIMITS OF LANDSCAPING AND IRRIGATION	
CONCRETE SIDEWALK	
LIMITS AC PAVEMENT REMOVAL	
LIMITS PAVING STRIPING AND MARKING REMOVAL	
GENERAL LEGEND:	
—————	CENTERLINE
—————	RIGHT OF WAY LINE
----	PROPERTY LINE
-----	AUTHORITY TO ENTER PROPERTY (AEP)
== // ==	SAWCUT LINE
.....	LANE LINE STRIPING
☆	AREA LIGHT
⊕	BENCHMARK
⊞	ELEC. VAULT/CABINET
⊕	ELECTRIC MANHOLE
MTR	ELECTRIC METER
⊕	FIRE HYDRANT
⊕	FOUND MONUMENT
⊕	GAS METER
⊕	GAS VALVE
IRR	IRR. CONTROLLER
⊕	IRR. VALVE
⊕	LOOP DETECTOR
⊕	SANITARY SEWER MH
⊕	SET MONUMENT
⊕	SIDEWALK RAMP
—	SIGN
⊕	STORM DRAIN INLET
⊕	STORM DRAIN MH
⊕	STREET LIGHT
⊕	STREET LIGHT PB
⊕	TELEPHONE MH
⊕	TELEPHONE PB
⊕	TRAFFIC SIGNAL POLE
⊕	TRAFFIC SIGNAL PB
⊕	TV PULLBOX
⊕	UTILITY POLE
⊕	UTILITY POLE GUY WIRE
⊕	UTILITY VAULT
⊕	WATER VAULT/CABINET
⊕	WATER MANHOLE
⊕	WATER METER
⊕	WATER VALVE
ABBREVIATIONS	
AC	ASPHALTIC CONCRETE
ACP	ASBESTOS CEMENT PIPE
APPROX.	APPROXIMATE
B/C	BACK OF CURB
B/C, BC	BACK TO BACK TACK-ON
B/C, T-O	BACK OF CURB RETURN
BEM	BENCHMARK
BOT	BOTTOM
B.R.	BACK OF RAMP
C, CL	CENTERLINE
CATV	CABLE T.V.
CLV	CITY OF LAS VEGAS
COMM.	COMMERCIAL
CONC.	CONCRETE
CONDM.	CONDUCTOR
CNSL	CONTROLLED LOW
CLSM	STRENGTH MATERIAL
C & G	CURB AND GUTTER
D/W	DRIVEWAY
DWR	DRAWING
DECR	END OF CURB RETURN (AT B/C)
ELEC.	ELECTRIC
EO, EP	EDGE OF PAVEMENT
ELEV.	ELEVATION
EXIST., EX	EXISTING
EXOH	EXISTING OVERHEAD UTILITY
FD	FOUND
FL	FLOWLINE
F.G.	FINISHED GRADE
FG	FIRE HYDRANT
FT	FOOT/FEET
FC	FACE OF CURB
G	GAS
GV	GAS VALVE
GW	GUY WIRE
INT.	INTERSECTION
IRR	IRRIGATION
L	LENGTH
LF	LINEAL FOOT, LINEAR FEET
LT	LEFT
MH	MANHOLE
MLCP	MULTI-LAYER COMPOSITE PIPE
NVE	NV ENERGY
NTS	NOT TO SCALE
O-C	ON CENTER
OHP	OVERHEAD POWER LINE
PC	POINT OF CURVE
P.I.P.	PROTECT IN PLACEMENT
PP	POWER POLE
PT	POINT OF TANGENCY
PRC	POINT OF REVERSE CURVE
PB	PULLBOX
PL	PROPERTY LINE
R	RADIUS
RIGHT	RIGHT
RP/M	RAISED PAVEMENT MARKER
R/W, R.O.W.	RIGHT OF WAY
SD	STORM DRAIN
SF	SQUARE FOOT
SS	SANITARY SEWER
STA.	STATION
STD.	STANDARD
SY	SQUARE YARD
S/W	SIDEWALK
T	TELEPHONE LINE
TC	TOP OF CURB
TEL	TELEPHONE
TRANS.	TRANSITION
TS	TOP OF RAMP CURB
TS	TRAFFIC SIGNAL
TP	TYPICAL
U.S.D.	UNIFORM STANDARD DRAWING
W	WATER LINE
WC	WHEEL CHAIR
WM	WATER METER
WV	WATER VALVE
W	WITH
△	INCLUDED DELTA ANGLE

The vicinity map shows the project location within a larger street network. Key streets include Centennial, Ann, Craig, Alexander, Gowan, Cheyenne, Carey, Lusk, McCook, Peck, Owens, Bonanza, Shawnee, Eastern, Mojave, Desert Inn, Twain, Flamingo, Tropicana, Russell, Sunset, I-15, I-25, and US 95. The project area is highlighted in the center of the map.

The key map shows the project area divided into four sheets: D1 & P1, D2 & P2, D3 & P3, and D4 & P4. The sheets are labeled with their respective stationing: D1 & P1 (STA 17+50.00 - STA 20+00), D2 & P2 (STA 20+00 - STA 22+50), D3 & P3 (STA 22+50 - STA 25+00), and D4 & P4 (STA 25+00 - STA 27+50). The sheets are also labeled with their respective sheet numbers: D1 & P1 (SHEETS D1 & P1), D2 & P2 (SHEETS D2 & P2), D3 & P3 (SHEETS D3 & P3), and D4 & P4 (SHEETS D4 & P4).

TITLE: SHEET:		CHARLESTON BOULEVARD MEDIAN ISLAND LANDSCAPING INDEX, LEGEND, ABBREVIATIONS, VICINITY MAP AND KEY MAP		DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT				CITY ENGINEER: PROGRAM MANAGER: DESIGNED BY: GJJ DRAWN BY: GJJ CHECKED BY: LLD		DAVID N. BOWERS, P.E., P.T.O.E. MARK SORENSEN, P.E.	DATE: JANUARY 2014	NO. DATE:	DESCRIPTION	APP'D
2 of 19 DRAWING NO. 107V5221		Sheet GN	REVISIONS											



BASIS OF BEARINGS:

N 89°21'52" E, BEING THE CENTERLINE OF CHARLESTON BOULEVARD BETWEEN THE NORTH 1/4 CORNER OF SECTION 3 AND THE NORTHEAST CORNER OF SECTION 3, AS SHOWN ON A RECORD OF SURVEY, RECORDED IN BOOK 177, PAGE 4 OF SURVEYS, OFFICIAL RECORDS, CLARK COUNTY, NV.

BENCHMARK:

CITY OF LAS VEGAS BM "CHASS": RIVET & PLATE IN TOP OF CURB, NORTHEAST CORNER OF CHARLESTON BOULEVARD AND LAS VEGAS BOULEVARD. ELEV. 2019.57' (NAVD86)

CURVE DATA:

CURVE	RADIUS	POINT	RADIUS	DELTA	LENGTH	TANGENT	COMMENT
(1)	23+21.54	112.16'L.T.	119.50'	18°03'51"	37.68'	18.99'	*FACE OF CURB
(2)	23+98.97	115.00'RT.	120.50'	18°49'45"	39.59'	19.98'	*FACE OF CURB
(3)	24+28.23	43.75'RT.	48.27'	40°03'55"	33.76'	17.71'	*FACE OF CURB
(4)	25+29.69	249.50'L.T.	249.50'	11°45'49"	51.23'	25.70'	*FACE OF CURB
(5)	26+31.63	245.00'RT.	250.50'	11°45'51"	51.43'	25.81'	*FACE OF CURB

NOTE: *AC SAWCUT LINE TO SERVE AS FORM FOR FACE OF PROPOSED CURB. SEE DETAILS A & G ON SHEET DT1.

DEMOLITION NOTES:

- SAWCUT, REMOVE AND DISPOSE EXISTING AC PAVEMENT.
- SAWCUT, REMOVE AND DISPOSE EXISTING TACK-ON MEDIAN ISLAND.
- REMOVE EXISTING PAVEMENT STRIPINGS AND MARKINGS.
- ADJUST EXISTING WATER VALVE COVER TO FINISHED GRADE PER UDACS PLATE NO. 38. VALVE SHALL BE ACCESSIBLE AT ALL TIMES.
- REMOVE AND DISPOSE EX. CONCRETE SIDEWALK PANEL AS REQUIRED TO CONSTRUCT NEW PULLBOX. SEE CONSTRUCTION NOTES 3 & 4 ON SHEET P2.
- SAWCUT, REMOVE AND DISPOSE EX. CONCRETE SIDEWALK CURB AND GUTTER AS REQUIRED TO CONSTRUCT NEW SIDEWALK RAMP. SEE CONSTRUCTION NOTE 21 ON SHEET P4.
- REMOVE AND SALVAGE EXISTING PEDESTRIAN CROSSING SIGN. RETURN SIGN TO CLV SERVICE YARD. A MINIMUM OF 24 HOURS NOTICE OF DELIVERY IS REQUIRED. CALL 229-6331 TO SET UP DELIVERY TIME AND LOCATION.
- SAWCUT, REMOVE AND DISPOSE EX. CONCRETE SIDEWALK RAMP, CURB AND GUTTER. SEE CONSTRUCTION NOTE 24 ON SHEET P4.
- 3/4" ROTO-MILL (LIMITS DETERMINED BY NDOT INSPECTOR).
- ANY FULL-DEPTH DENSE GRADE PAVEMENT REMOVAL AND REPLACEMENT WILL BE COVERED PER SPECIAL PROVISIONS 402. REF: DETAIL "M" ON SHEET DT1.

CLARIFICATION NOTES:

- PROTECT-IN-PLACE EXISTING AC PAVEMENT.
- PROTECT-IN-PLACE EXISTING MEDIAN ISLAND.
- PROTECT-IN-PLACE EXISTING WATER VALVE.
- PROTECT-IN-PLACE EXISTING PAVEMENT STRIPINGS AND MARKINGS.
- PROTECT-IN-PLACE EXISTING SANITARY SEWER MANHOLE.
- PROTECT-IN-PLACE EXISTING SERVICE PEDESTAL.
- PROTECT-IN-PLACE EXISTING WATERLINE ACCESS MANHOLE.
- PROTECT-IN-PLACE EXISTING SURVEY MONUMENT.
- PROTECT-IN-PLACE EXISTING SURVEY MONUMENT OR REPLACE UPON COMPLETION OF CONSTRUCTION. (SEE CLV GENERAL NOTE #13).

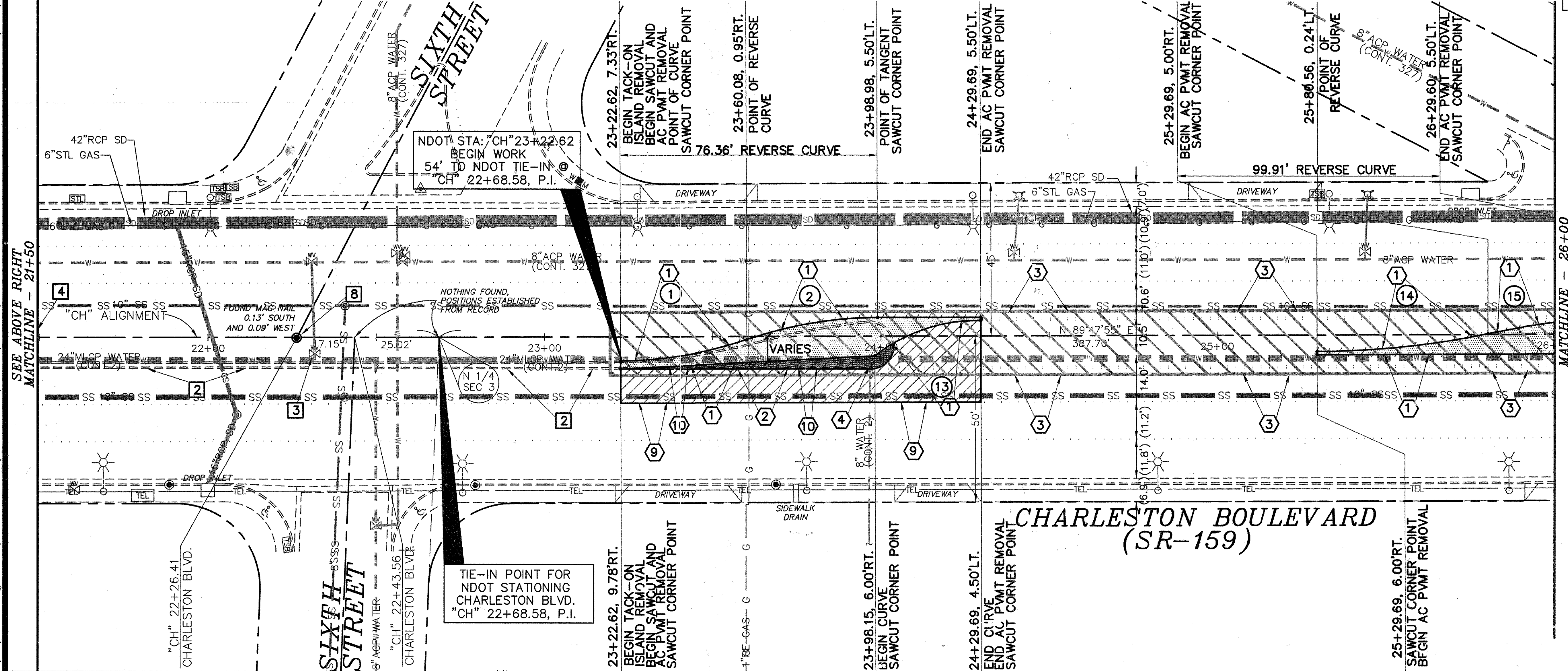
UTILITY NOTES:

ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES DEPICTED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHERE EXCAVATING AND GRADING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.

APPROVED FOR CONSTRUCTION
Dr. Heade
Las Vegas Valley Water District Engineering Services Manager
Project No. 116055 Date: 02/24/14



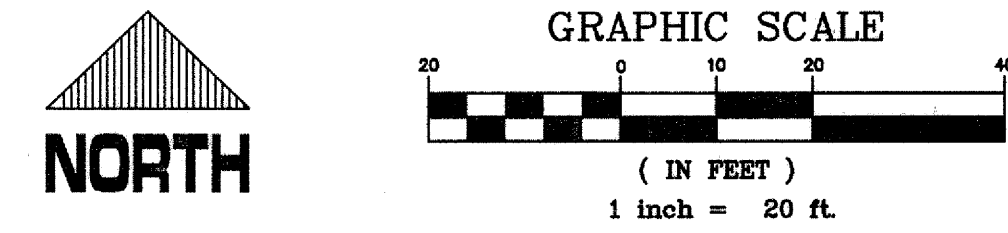
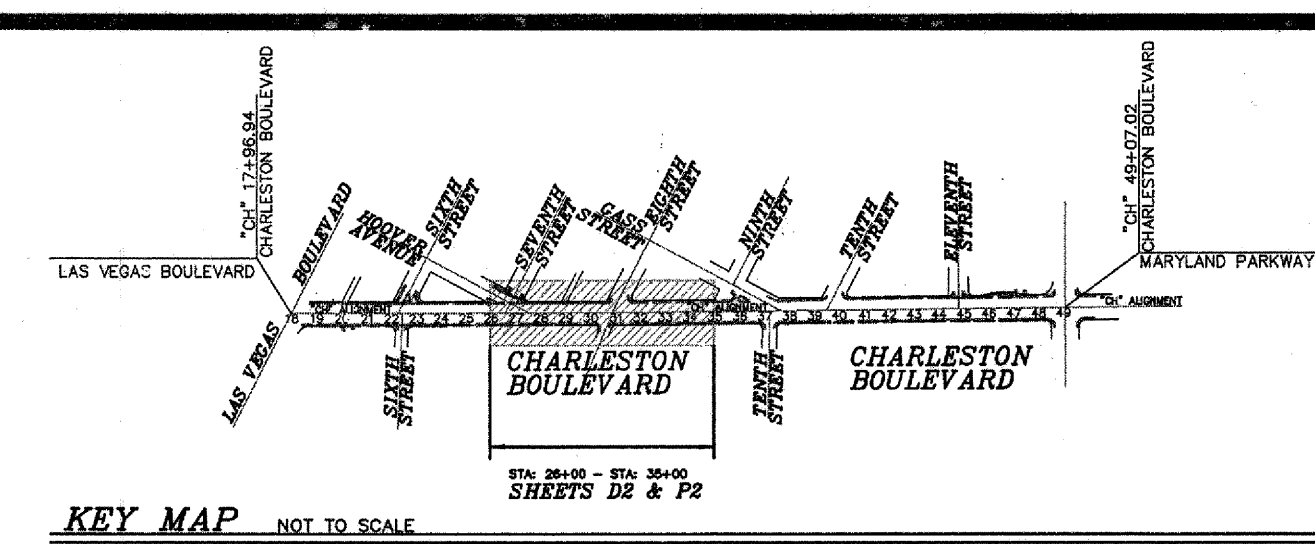
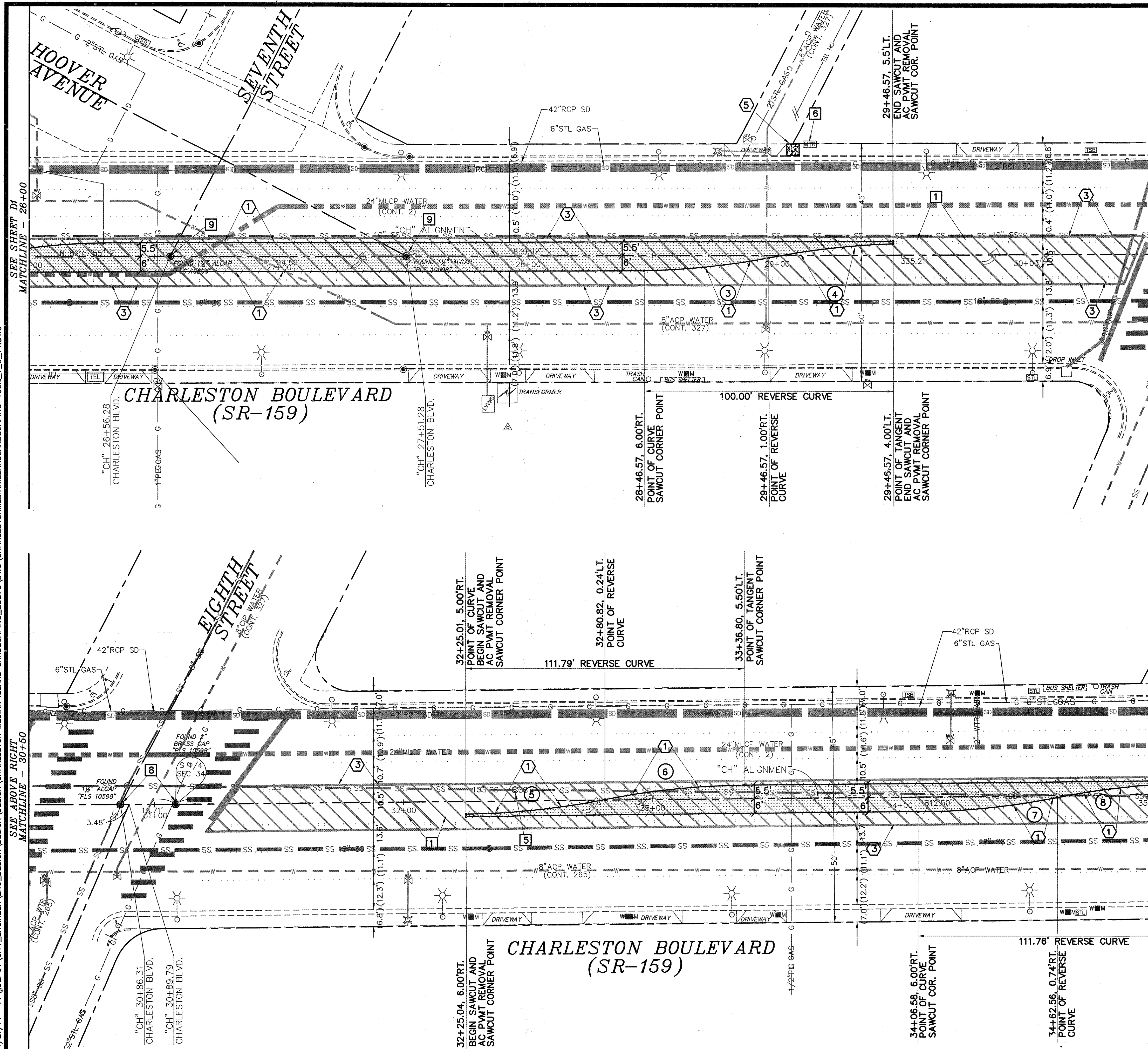
REVISIONS		NO. DATE		DESCRIPTION		APP'D	

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT
CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E.
PROGRAM MANAGER: MARK SORESENSEN, P.E.
DESIGNED BY: GJJ
DRAWN BY: GJJ
CHECKED BY: LLD
DATE: JANUARY 2014

CHARLESTON BOULEVARD
MEDIAN ISLAND LANDSCAPING
DEMOLITION PLAN
"CH" 17+96.94 TO "CH" 26+00.00

TITLE: SHEET: 1-24

Sheet
D1
3 of 19
DRAWING NO.
107V5221



Call before you Dig
Call 811
1-800-227-2800
CLARK COUNTY WORK OPERATIONS
1-702-455-7544

Avoid cutting overhead utility lines. It's costly.
Call before you do Overhead
1-702-593-6111
OVERHEAD SERVICE ALERT

Call before you Under Ground
1-702-455-7511
CLARK COUNTY WORK OPERATIONS
1-702-593-6611
UNDERGROUND SERVICE ALERT

BASIS OF BEARINGS:
N 89°21'52" E, BEING THE CENTERLINE OF CHARLESTON BOULEVARD BETWEEN THE NORTH 1/4 CORNER OF SECTION 3 AND THE NORTHEAST CORNER OF SECTION 3, AS SHOWN ON A RECORD OF SURVEY, RECORDED IN BOOK 177, PAGE 4 OF SURVEYS, OFFICIAL RECORDS, CLARK COUNTY, NV.

BENCHMARK:
CITY OF LAS VEGAS BM "CHASS": RIVET & PLATE IN TOP OF CURB, NORTHEAST CORNER OF CHARLESTON BOULEVARD AND LAS VEGAS BOULEVARD. ELEV. 2019.57' (NAVD88)

CURVE	RADIUS POINT	RADIUS	DELTA	LENGTH	TANGENT	COMMENT
3	28+40.64, 305.82'LT.	311.87'	91°4'30"	50.30'	25.21'	*FACE OF CURB
4	29+55.57, 307.24'RT.	311.87'	91°5'05"	50.36'	25.21'	*FACE OF CURB
5	32+24.01, 258.70'LT.	262.70'	10°58'27"	50.32'	25.24'	*FACE OF CURB
6	33+26.05, 256.70'RT.	262.70'	10°58'27"	50.32'	25.24'	*FACE OF CURB
7	34+08.58, 294.50'LT.	300.50'	10°44'05"	56.30'	28.23'	*FACE OF CURB
8	35+18.34, 295.00'RT.	299.50'	10°44'05"	56.11'	28.14'	*FACE OF CURB

NOTES:
*AC SAWCUT LINE TO SERVE AS FORM FOR FACE OF PROPOSED CURB.
SEE DETAILS A & G SHEET DTI.
**NON-TANGENT CURVES

DEMOLITION NOTES:

- 1 SAWCUT, REMOVE AND DISPOSE EXISTING AC PAVEMENT.
- 2 SAWCUT, REMOVE AND DISPOSE EXISTING TACK-ON MEDIAN ISLAND.
- 3 REMOVE EXISTING PAVEMENT STRIPINGS AND MARKINGS.
- 4 REMOVE EXISTING WATER VALVE COVER TO FINISHED GRADE PER UDACS PLATE NO. 39. VALVE SHALL BE ACCESSIBLE AT ALL TIMES.
- 5 REMOVE AND DISPOSE EX. CONCRETE SIDEWALK PANEL AS REQUIRED TO CONSTRUCT NEW PULLBOX. SEE CONSTRUCTION NOTES 3 & 4 ON SHEET P2.
- 6 SAWCUT, REMOVE AND DISPOSE EX. CONCRETE SIDEWALK GUTTER AS REQUIRED TO CONSTRUCT NEW SIDEWALK RAMP. SEE CONSTRUCTION NOTE 21 ON SHEET P4.
- 7 REMOVE AND SALVAGE EXISTING PEDESTRIAN CROSSING SIGN. RETURN SIGN TO CLV SERVICE YARD. A MINIMUM OF 24 HOURS NOTICE OF DELIVERY IS REQUIRED CALL 229-6331 TO SET UP DELIVERY TIME AND LOCATION.
- 8 SAWCUT, REMOVE AND DISPOSE EX. CONCRETE SIDEWALK RAMP, CURB AND GUTTER. SEE CONSTRUCTION NOTE 24 ON SHEET P4.
- 9 3/4" ROTO-MILL (LIMITS DETERMINED BY NDOT INSPECTOR).
- 10 ANY FULL-DEPTH DENSE GRADE PAVEMENT REMOVAL AND REPLACEMENT WILL BE COVERED PER SPECIAL PROVISIONS 402. REF: DETAIL "M" ON SHEET DTI.

CLARIFICATION NOTES:

- 1 PROTECT-IN-PLACE EXISTING AC PAVEMENT.
- 2 PROTECT-IN-PLACE EXISTING MEDIAN ISLAND.
- 3 PROTECT-IN-PLACE EXISTING WATER VALVE.
- 4 PROTECT-IN-PLACE EXISTING PAVEMENT STRIPINGS AND MARKINGS.
- 5 PROTECT-IN-PLACE EXISTING SANITARY SEWER MANHOLE.
- 6 PROTECT-IN-PLACE EXISTING SERVICE PEDESTAL.
- 7 PROTECT-IN-PLACE EXISTING WATERLINE ACCESS MANHOLE.
- 8 PROTECT-IN-PLACE EXISTING SURVEY MONUMENT.
- 9 PROTECT-IN-PLACE EXISTING SURVEY MONUMENT OR REPLACE UPON COMPLETION OF CONSTRUCTION. (SEE CLV GENERAL NOTE #13).

UTILITY NOTES:

ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

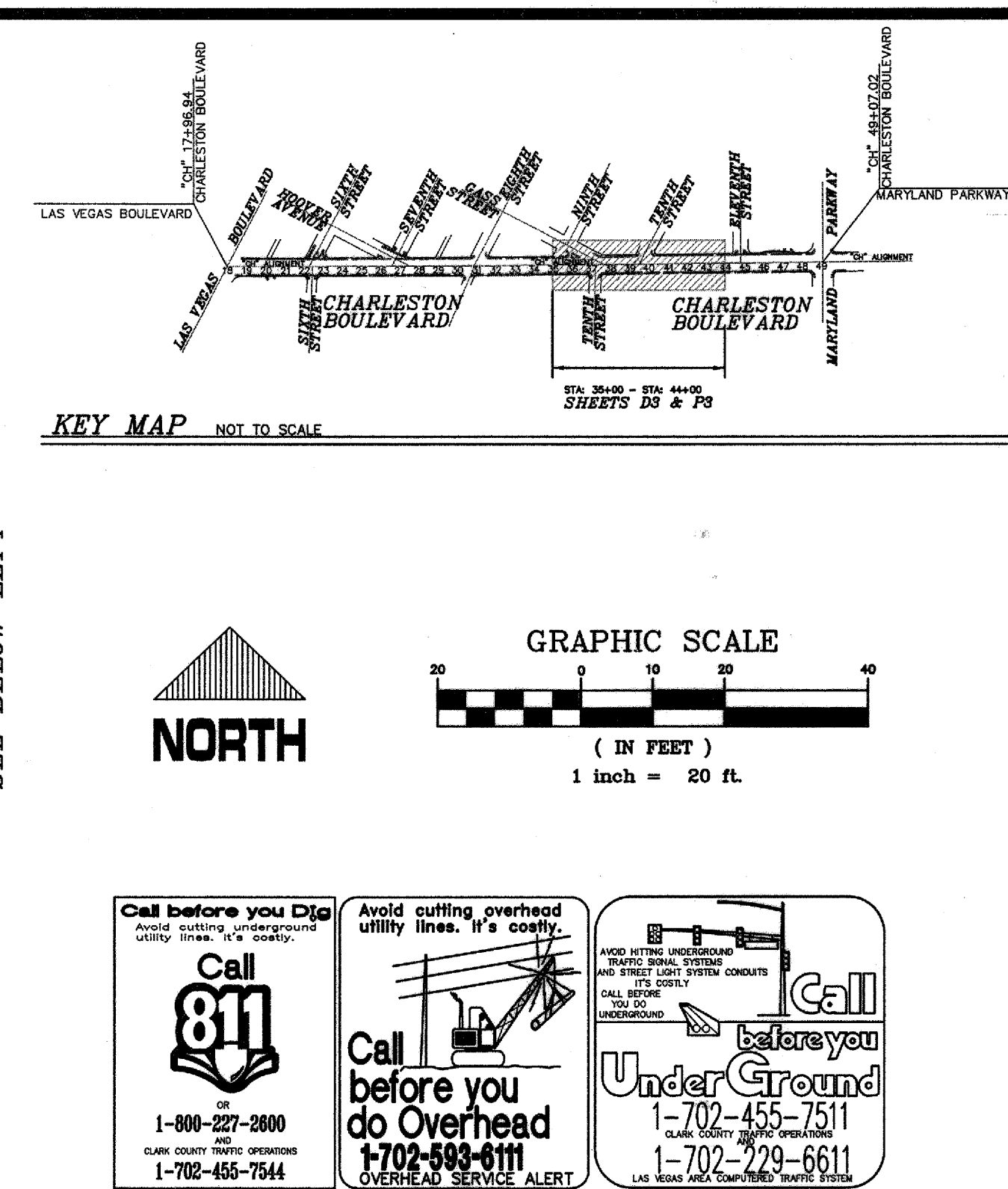
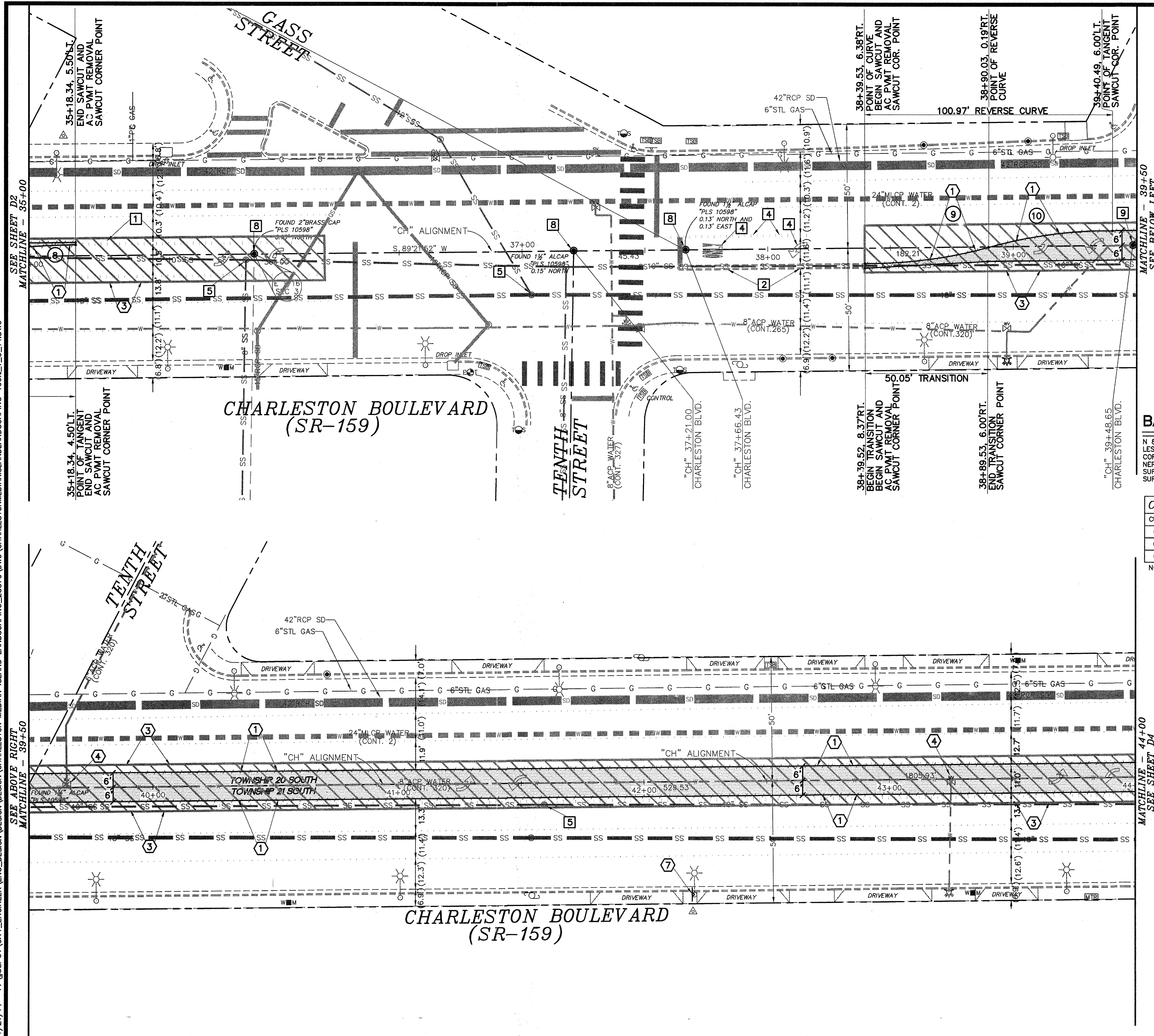
THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES DEPICTED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHERE EXCAVATING AND GRADING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.

APPROVED FOR CONSTRUCTION
David H. H. H.
Las Vegas Valley Water District Engineering Services Manager
Project No. 116055 Date: 02/04/14

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT
CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E.
PROGRAM MANAGER: MARK SORESENSEN, P.E.
DESIGNED BY: GJJ
DRAWN BY: GJJ
CHECKED BY: LLD
DATE: JANUARY 2014
NO. DATE: DESCRIPTION: APPD

CHARLESTON BOULEVARD
MEDIAN ISLAND LANDSCAPING
DEMOLITION PLAN
"CH" 26+00.00 TO "CH" 35+00.00

Sheet
D2
4 of 19
DRAWING NO.
107V5221



BASIS OF BEARINGS:

N 89°21'52\" E, BEING THE CENTERLINE OF CHARLESTON BOULEVARD BETWEEN THE NORTH 1/4 CORNER OF SECTION 3 AND THE NORTHEAST CORNER OF SECTION 3, AS SHOWN ON A RECORD OF SURVEY, RECORDED IN BOOK 177, PAGE 4 OF SURVEYS, OFFICIAL RECORDS, CLARK COUNTY, NV.

BENCHMARK:

CITY OF LAS VEGAS BM "CHASS": RIVET & PLATE IN TOP OF CURB, NORTHEAST CORNER OF CHARLESTON BOULEVARD AND LAS VEGAS BOULEVARD. ELEV. 2019.57' (NAVD88)

CURVE DATA:

CURVE	RADIUS POINT	RADIUS	DELTA	LENGTH	TANGENT	COMMENT
(8)	35+18.34, 295.00'RT.	299.50'	10°44'05"	56.11'	28.14'	*FACE OF CURB
(9)	38+42.64, 177.31'LT.	183.72'	15°55'02"	51.04'	25.69'	*FACE OF CURB
(10)	39+37.42, 177.68'RT.	183.70'	15°54'34"	51.01'	25.67'	*FACE OF CURB

NOTE: *AC SAWCUT LINE TO SERVE AS FORM FOR FACE OF PROPOSED CURB. SEE DETAILS A & G ON SHEET DT1.

DEMOLITION NOTES:

- 1 SAWCUT, REMOVE AND DISPOSE EXISTING AC PAVEMENT.
- 2 SAWCUT, REMOVE AND DISPOSE EXISTING TACK-ON MEDIAN ISLAND.
- 3 REMOVE EXISTING PAVEMENT STRIPINGS AND MARKINGS.
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- 5 REMOVE AND DISPOSE EX. CONCRETE SIDEWALK PANEL AS REQUIRED TO CONSTRUCT NEW PULLBOX. SEE CONSTRUCTION NOTES 3 & 4 ON SHEET P2.
- 6 SAWCUT, REMOVE AND DISPOSE EX. CONCRETE SIDEWALK, CURB AND GUTTER AS REQUIRED TO CONSTRUCT NEW SIDEWALK RAMP. SEE CONSTRUCTION NOTE 21 ON SHEET P4.
- 7 REMOVE AND SALVAGE EXISTING PEDESTRIAN CROSSING SIGN. RETURN SIGN TO CITY SERVICE YARD. A MINIMUM OF 24 HOURS NOTICE OF DELIVERY IS REQUIRED CALL 229-6331 TO SET UP DELIVERY TIME AND LOCATION.
- 8 SAWCUT, REMOVE AND DISPOSE EX. CONCRETE SIDEWALK RAMP, CURB AND GUTTER. SEE CONSTRUCTION NOTE 24 ON SHEET P4.
- 9 3/4\" ROTO-MILL (LIMITS DETERMINED BY NDOT INSPECTOR).
- 10 ANY FULL-DEPTH DENSE GRADE PAVEMENT REMOVAL AND REPLACEMENT WILL BE COVERED PER SPECIAL PROVISIONS 402. REF: DETAIL "M" ON SHEET DT1.

CLARIFICATION NOTES:

- 1 PROTECT-IN-PLACE EXISTING AC PAVEMENT.
- 2 PROTECT-IN-PLACE EXISTING MEDIAN ISLAND.
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- 9 PROTECT-IN-PLACE EXISTING SURVEY MONUMENT OR REPLACE UPON COMPLETION OF CONSTRUCTION. (SEE CLV GENERAL NOTE #13).

UTILITY NOTES:

ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

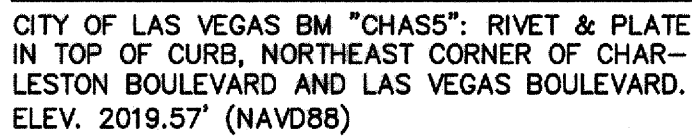
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THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES DEPICTED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHERE EXCAVATING AND GRADING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.

APPROVED FOR CONSTRUCTION

David M. Hume
Las Vegas Valley Water District Engineering Services Manager
Project No. 116055 Date: 02/04/14

REVISIONS		NO.	DATE	DESCRIPTION	APP'D
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E. PROGRAM MANAGER: MARK SORESENSEN, P.E. DESIGNED BY: GJJ DRAWN BY: GJJ CHECKED BY: LLD DATE: JANUARY 2014					
CHARLESTON BOULEVARD MEDIAN ISLAND LANDSCAPING TITLE:					
SHEET: DEMOLITION PLAN "CH" 35+00.00 TO "CH" 44+00.00					
Sheet D3 5 of 19 DRAWING NO. 107V5221					



- UTILITY NOTES:**
- ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
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	TITLE: CHARLESTON BOULEVARD MEDIAN ISLAND LANDSCAPING		SHEET: DEMOLITION PLAN "CH" 44+00.00 TO "CH" 49+07.02	
	Drawing No. 107V5221		Sheet D4 6 of 19	
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E. PROGRAM MANAGER: MARK SORESENSEN, P.E. DESIGNED BY: GJJ DRAWN BY: GJJ CHECKED BY: LLD DATE: JANUARY 2014				
				
REVISIONS:				
NO. DATE:			DESCRIPTION:	
APP'D:				



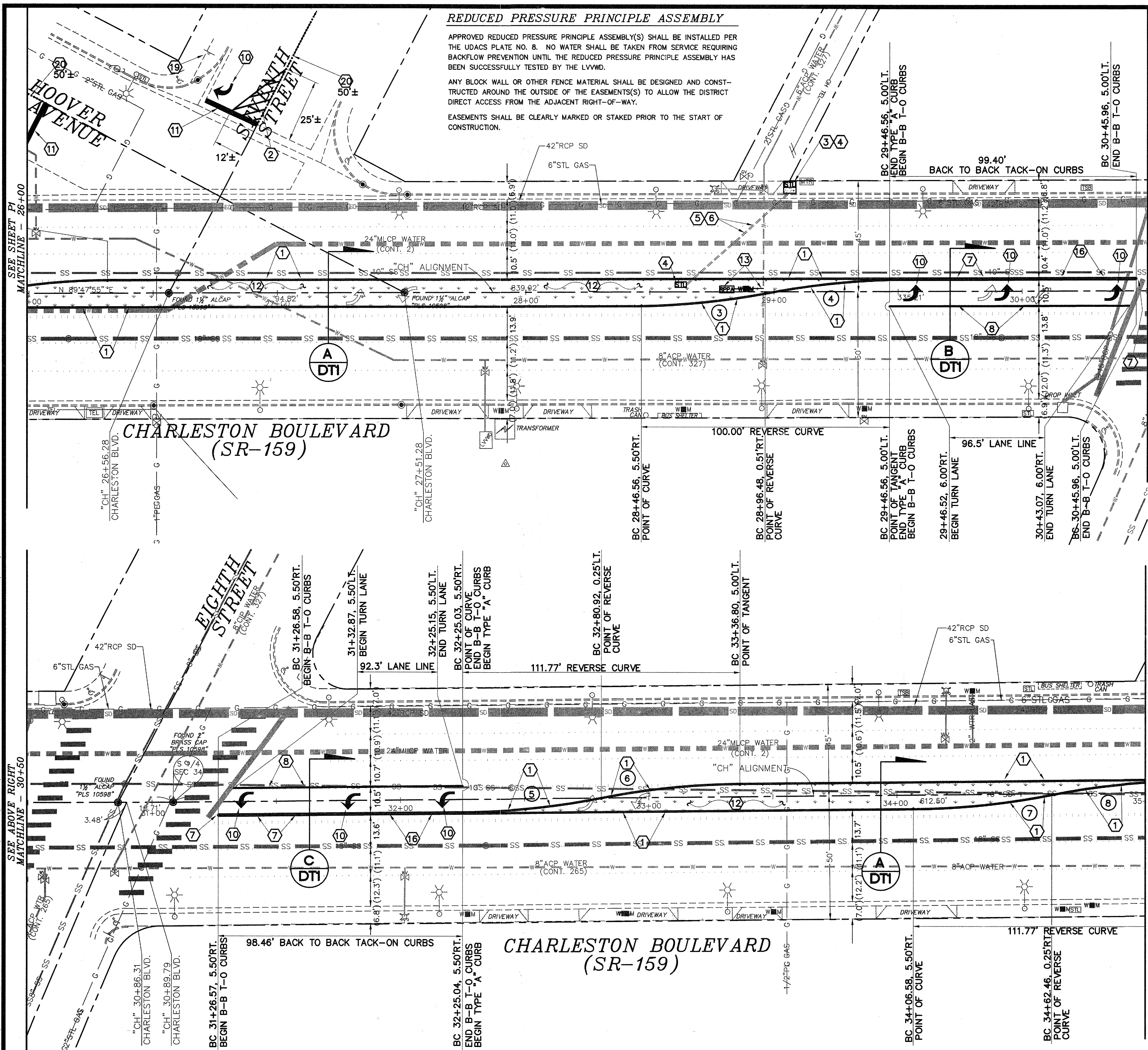
CITY OF LAS VEGAS BM "CHAS5": RIVET & PLATE
IN TOP OF CURB, NORTHEAST CORNER OF CHAR-
LESTON BOULEVARD AND LAS VEGAS BOULEVARD.
ELEV. 2019.57' (NAVD88)

CURVE DATA:						
C/RVE	RADIUS POINT	RADIUS	DELTA	LENGTH	TANGENT	COMMENT
(1)	23+21.53, 112.16"/L	120.00'	18'03"51"	37.83'	19.08'	BACK OF CURB
(2)	23+98.97, 115.00"/RT.	120.00'	18'49'45"	39.44'	19.90'	BACK OF CURB
(15)	24+28.23, 43.75"/RT.	48.77'	40'03"55"	34.10'	17.78'	BACK OF CURB
(16)	25+29.69, 244.50"/L	250.00'	11'45'49"	51.33'	25.75'	BACK OF CURB
(17)	26+31.63, 245.00"/RT.	250.00'	11'45'51"	51.33'	25.76'	BACK OF CURB

- (1) CONSTRUCT TYPE "A" ISLAND CURB PER USD 219. TOP OF CURB TO BE MEASURED 6" ABOVE AC PAVEMENT SAWCUT.
- (2) INSTALL "GORE OUT" CHEVRON STRIPING (NDOT TYPE 2 FILM) PER USD 245.
- (3) RE-CONSTRUCT CONCRETE SIDEWALK PANEL PER USD 234. SEE DEMOLITION NOTE 5 ON SHEET D1.
- (4) INSTALL #3 1/2 PULLBOX PER USD 326.
- (5) INSTALL 3" STEEL SLEEVE W/ DIRECTIONAL BORING. SEE ELECTRIC SERVICE SLEEVE TRENCHING DETAIL "K" ON SHEET DT1.
- (6) INSTALL 2" ELECTRICAL CONDUIT W/ CONDUCTORS IN 3" STEEL SLEEVE.
- (7) INSTALL MEDIAN ISLAND NOSE MARKINGS PER USD 248. PAINT ENTIRE LENGTH OF BACK TO BACK TACK-ON CURBS YELLOW. INSTALL ONE RPM PLATE PER 10' OF CURB. AND ONE CURB, WITHIN PITCH LIMITS, REPAINT CURBS AND REPLACE MISSING RPM'S.
- (8) INSTALL ADDED LEFT TURN LANE (RPM'S) PER USD 246.
- (9) INSTALL PEDESTRIAN CROSSING SIGN (W11-2) 36"x36" AND "AHEAD" SIGN (W16-9P) 24"x18" - FLOURESCENT GREEN.
- (10) INSTALL "ARROW" LEGEND (NDOT TYPE 2 FILM). REF: USD 246.
- (11) INSTALL STOP BAR (NDOT TYPE 2 FILM) PER USD 254A.
- (12) INSTALL LANDSCAPING AND IRRIGATION. SEE LANDSCAPING PLANS L-1, L-2 & L-3. SEE IRRIGATION PLANS IR-1, IR-2, IR-3, IR-4 & IR-5.
- (13) INSTALL WATER SERVICE. INSTALL 1" WATER METER AND 1" RPPA PER UDACS PLATES 4 & 8.
- (14) INSTALL DETECTABLE TACTILE WARNING STRIP PER USD 235.
- (15) INSTALL YIELD BAR (NDOT TYPE 2 FILM) PER NDOT DWG. T-381.3.
- (16) CONSTRUCT BACK TO BACK TACK-ON CURBS. REF: USD 220.
- (17) INSTALL SIGN POST AND "LEFT TURN ONLY" SIGN (R3-5L) PER USD 249.
- (18) INSTALL SIGN POST AND "ONE WAY" SIGN (R6-1(R)) PER USD 249.
- (19) INSTALL "NO LEFT TURNS" SIGN (R3-2) ON TO EXISTING STOP SIGN POST.
- (20) INSTALL TYPE 1 CENTERLINE (RPM'S) PER USD 244.
- (21) CONSTRUCT TYPE "L" & G PER USD 216 (MODIFIED FOR NONSTANDARD CONSTRUCTION). INSTALL PER CONCRETE SIDEWALK RAMP PER USD 235. SEE DETAIL "M" ON SHEET P4.
- (22) INSTALL CROSS WALK (NDOT TYPE 2 FILM) PER USD 254A.
- (23) CONSTRUCT VARIABLE WIDTH TACK-ON MEDIAN ISLAND PER USD 221.
- (24) CONSTRUCT TYPE "L" & G PER USD 216 (MODIFIED FOR NONSTANDARD NDOT CURB FACE). CONSTRUCT CONCRETE SIDEWALK PER USD 234. SEE DETAIL "M" ON SHEET P4.
- (25) INSTALL "YIELD" SIGN (R1-5) 36"x36".
- (26) CONSTRUCT 24" SQ. TYPE "C" FOUNDATION PER USD 717. INSTALL 15' POLE PER USD 304 TACTILE LOCATIONS OF POLES TO BE FIELD VERIFIED DURING CONSTRUCTION. INSTALL PER ACTIVATED SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM W/ PED. CROSSING SIGN (W11-2) 36"x36" ARROW SIGN (W16-7P) 24"x18" FLOURESCENT GREEN 4" HX 4" HX BUTTON SIGN (R1-25) 4"x7".
- (27) 3/4" OPEN GRADE (LIMITS DETERMINED BY NDOT INSPECTOR).

Las Vegas Valley Water District Engineering Services Manager
Project No. 116055 Date: 02/04/14

1/21/14 F:\DEPOT\CITY_ENGINEER\DESIGN\CHARLESTON MEDIAN ISLAND LANDSCAPING-100%_1_6_14.DWG



REDUCED PRESSURE PRINCIPLE ASSEMBLY

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWMD.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENTS(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

KEY MAP NOT TO SCALE

GRAPHIC SCALE
1 inch = 20 ft.

Call before you Dig
1-800-227-2800
1-702-455-7544

Call before you do Overhead
1-702-583-6111

Call before you Under Ground
1-702-455-7511
1-702-299-6611

BASIS OF BEARINGS:
N 89°21'52" E, BEING THE CENTERLINE OF CHARLESTON BOULEVARD BETWEEN THE NORTH 1/4 CORNER OF SECTION 3 AND THE NORTHEAST CORNER OF SECTION 3, AS SHOWN ON A RECORD OF SURVEY, RECORDED IN BOOK 177, PAGE 4 OF SURVEYS, OFFICIAL RECORDS, CLARK COUNTY, NV.

BENCHMARK:
CITY OF LAS VEGAS BM "CHASS": RIVET & PLATE IN TOP OF CURB, NORTHEAST CORNER OF CHARLESTON BOULEVARD AND LAS VEGAS BOULEVARD. ELEV. 2019.57' (NAVD88)

CURVE DATA:

CURVE	RADIUS	POINT	RADIUS	DELTA	LENGTH	TANGENT	COMMENT
3	28+40.62	305.82'LT.	311.37'	91°4'30"	50.22'	25.17'	BACK OF CURB
4	29+52.48	307.82'RT.	312.37'	91°4'30"	50.38'	25.25'	BACK OF CURB
5	32+25.04	294.50'LT.	300.00'	10°44'05"	56.21'	28.19'	BACK OF CURB
6	33+36.80	295.00'RT.	300.00'	10°44'05"	56.21'	28.19'	BACK OF CURB
7	34+06.58	294.50'LT.	300.00'	10°44'05"	56.21'	28.19'	BACK OF CURB
8	35+18.34	295.00'RT.	300.00'	10°44'05"	56.21'	28.19'	BACK OF CURB

NOTE: **NON-TANGENT CURVES

CONSTRUCTION NOTES:

- CONSTRUCT TYPE "A" ISLAND CURB PER USD 219. TOP OF CURB TO BE MEASURED 6" ABOVE AC PAVEMENT SAWCUT.
- INSTALL "GORE OUT" CHEVRON STRIPING (NDOT TYPE 2 FILM) PER USD 245.
- RE-CONSTRUCT CONCRETE SIDEWALK PANEL PER USD 234. SEE DEMOLITION NOTE 5 ON SHEET D1.
- INSTALL #3 1/2 PULLBOX PER USD 326.
- INSTALL 1" STEEL SLEEVE VIA DIRECTIONAL BORING. SEE ELECTRIC SERVICE SLEEVE TRENCHING DETAIL "K" ON SHEET D11.
- INSTALL 2" ELECTRICAL CONDUIT W/ CONDUCTORS IN 3" STEEL SLEEVE.
- INSTALL MEDIAN ISLAND NOSE MARKINGS PER USD 248. PAINT ENTIRE LENGTH OF BACK TO BACK TACK-ON CURBS YELLOW. INSTALL ONE RPM PER 20' LENGTH OF CURB, ON EXISTING ISLANDS/CURBS, WITHIN PROJECT LIMITS. REPAINT CURBS AND REPLACE MISSING RPM'S.
- INSTALL ADDED LEFT TURN LANE (RPM'S) PER USD 246.
- INSTALL PEDESTRIAN CROSSING SIGN (W11-2) 36"x36" AND "AHEAD" SIGN (W16-5P) 24"x18" - FLOURESCENT GREEN.
- INSTALL "ARROW" LEGEND (NDOT TYPE 2 FILM). REF: USD 246.
- INSTALL STOP BAR (NDOT TYPE 2 FILM) PER USD 254A.
- INSTALL LANDSCAPING AND IRRIGATION. SEE LANDSCAPING PLANS L-1, L-2 AND L-3. SEE IRRIGATION PLANS IR-1, IR-2, IR-3, IR-4 & IR-5.
- INSTALL WATER SERVICE. INSTALL 1" WATER METER AND 1" RPPA PER UDACS PLATES 4 AND 8.
- INSTALL DETECTABLE TACTILE WARNING STRIP PER USD 235.
- INSTALL YIELD BAR (NDOT TYPE 2 FILM) PER NDOT DWG. T-38.1.3.
- CONSTRUCT BACK TO BACK TACK-ON CURBS. REF: USD 220.
- INSTALL SIGN POST AND "LEFT TURN ONLY" SIGN (R3-5L) PER USD 249.
- INSTALL SIGN POST AND "ONE WAY" SIGN (R6-1(R)) PER USD 249.
- INSTALL "NO LEFT TURNS" SIGN (R3-2) ON TO EXISTING STOP SIGN POST.
- INSTALL TYPE 1 CENTERLINE (RPM'S) PER USD 244.
- CONSTRUCT TYPE "L" C&G PER USD 216 (MODIFIED FOR NONSTANDARD NDOT CURB FACE). CONSTRUCT CONCRETE SIDEWALK RAMP PER USD 235. SEE DETAIL "M" ON SHEET P4.
- INSTALL CROSS WALK (NDOT TYPE 2 FILM) PER USD 254A.
- CONSTRUCT VARIABLE WIDTH TACK-ON MEDIAN ISLAND PER USD 221.
- CONSTRUCT TYPE "L" C&G PER USD 216 (MODIFIED FOR NONSTANDARD NDOT CURB FACE). CONSTRUCT CONCRETE SIDEWALK RAMP PER USD 234. SEE DETAIL "M" ON SHEET P4.
- INSTALL "YIELD" SIGN (R1-5) 36"x36".
- CONSTRUCT 24" SQ. TYPE "C" FOUNDATION PER USD 217. INSTALL 15' POLE PER USD 806 (ACTUAL LOCATIONS OF POLES TO BE FIELD VERIFIED DURING CONSTRUCTION). INSTALL PEDESTRIAN ACTIVATED, SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM W/ PED. CROSSING SIGN (W11-2) 36"x36", "ARROW" SIGN (W16-7P) 24"x18" FLOURESCENT GREEN AND PUSH BUTTON SIGN (R10-25) 5"x7".
- 3/4" OPEN GRADE (LIMITS DETERMINED BY NDOT INSPECTOR).

APPROVED FOR CONSTRUCTION

David M. ...

Las Vegas Valley Water District Engineering Services Manager

Project No. 116055 Date: 02/04/14

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT MANAGEMENT

CITY ENGINEER: DAVID N. BOWERS, P.E., P.T.O.E.
PROGRAM MANAGER: MARK SORESENSEN, P.E.

DESIGNED BY: GJJ
DRAWN BY: GJJ
CHECKED BY: LLD

DATE: JANUARY 2014

CHARLESTON BOULEVARD

MEDIAN ISLAND LANDSCAPING

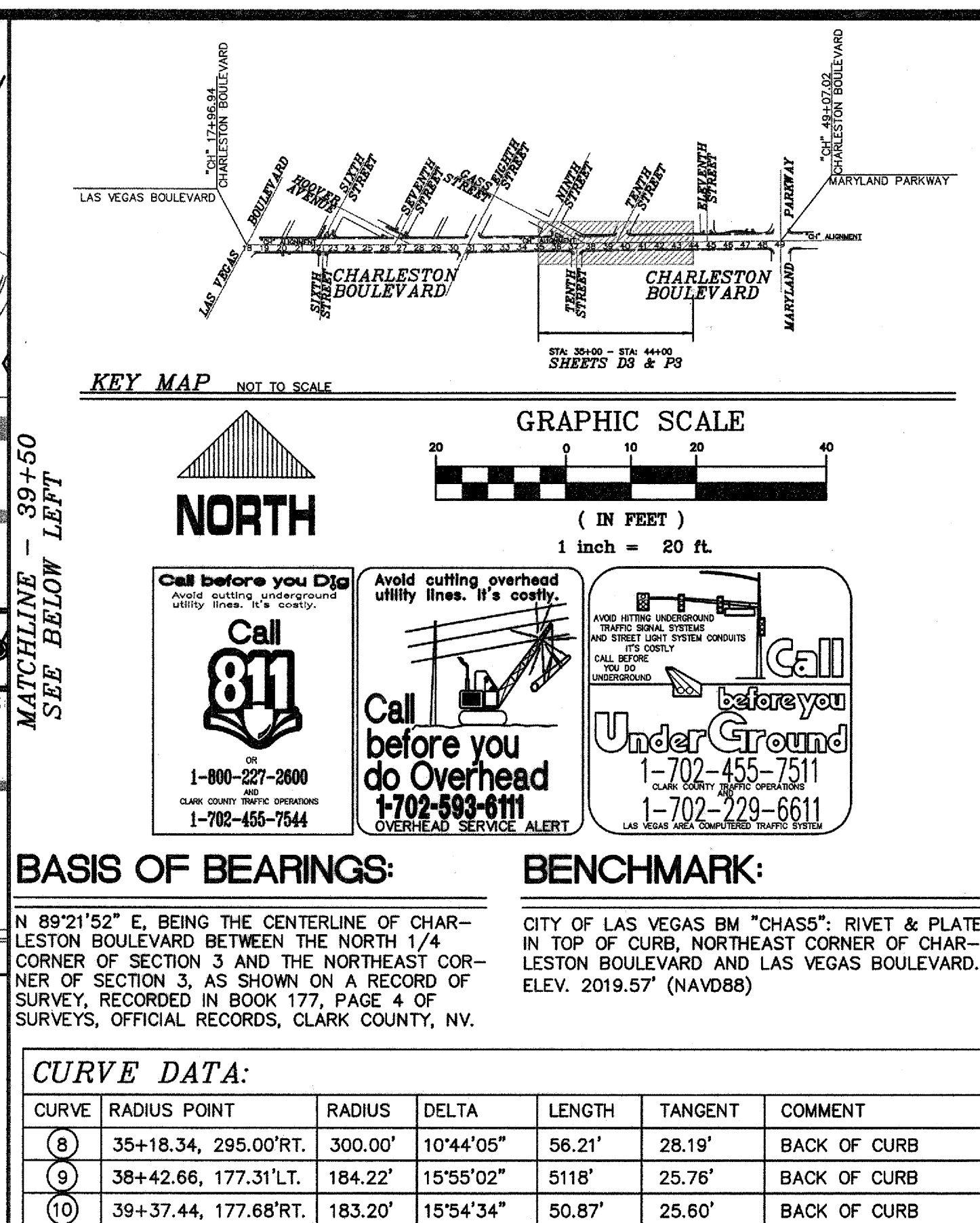
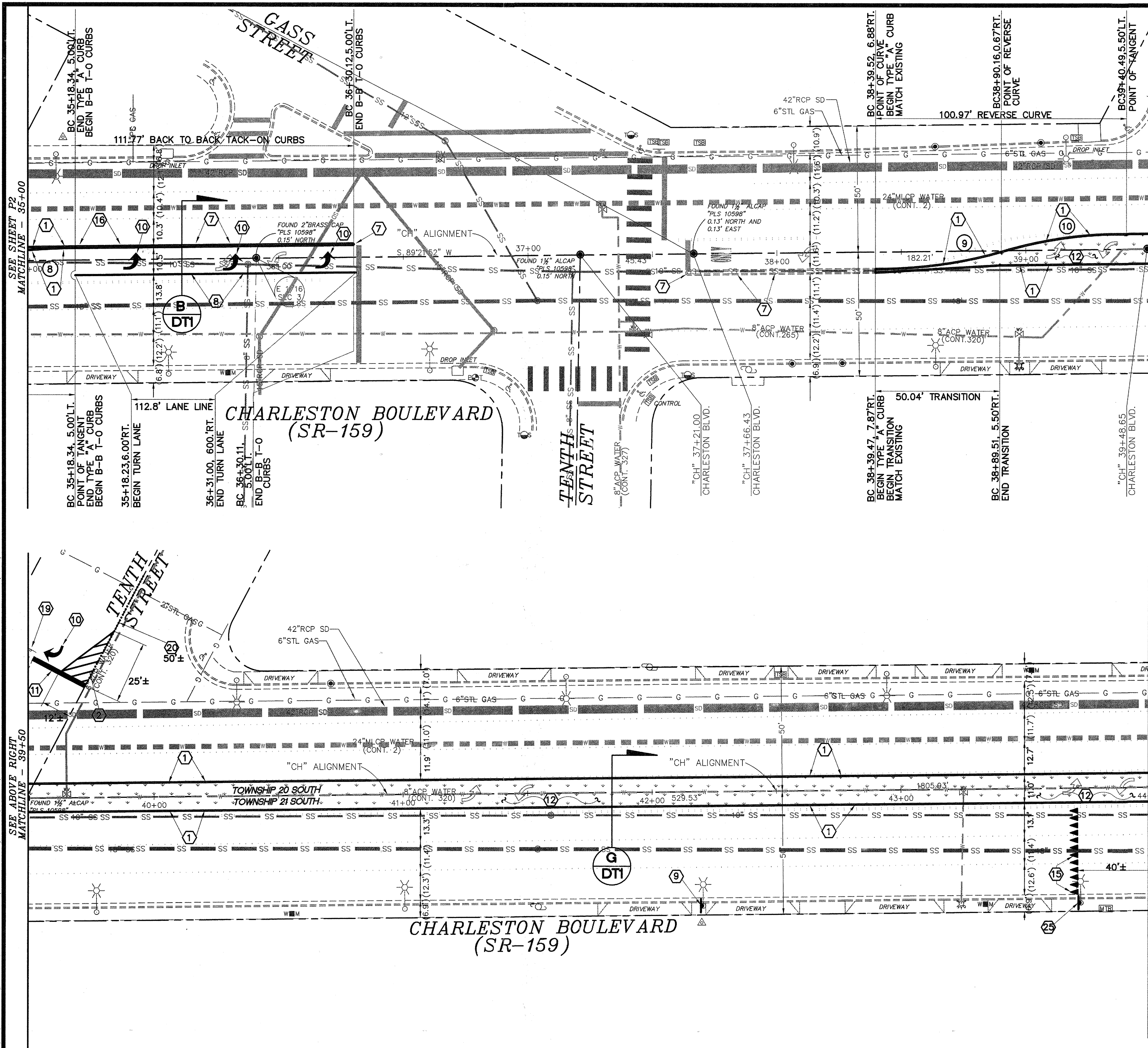
IMPROVEMENT PLAN

"CH" 26+00.00 "CH" 35+00.00

Sheet **P2**

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DRAWING NO. 107V5221



- CONSTRUCTION NOTES:
- CONSTRUCT TYPE "A" ISLAND CURB PER USD 219. TOP OF CURB TO BE MEASURED 6" ABOVE AC PAVEMENT SAWCUT.
 - INSTALL "GORE OUT" CHEVRON STRIPING (NDOT TYPE 2 FILM) PER USD 245.
 - RE-CONSTRUCT CONCRETE SIDEWALK PANEL PER USD 234. SEE DEMOLITION NOTE 5 ON SHEET D1.
 - INSTALL #3 1/2 PULLBOX PER USD 326.
 - INSTALL 3" STEEL SLEEVE VIA DIRECTIONAL BORING. SEE ELECTRIC SERVICE SLEEVE TRENCHING DETAIL "K" ON SHEET DT1.
 - INSTALL 2" ELECTRICAL CONDUIT W/ CONDUCTORS IN 3" STEEL SLEEVE.
 - INSTALL MEDIAN ISLAND NOSE MARKINGS PER USD 248. PAINT ENTIRE LENGTH OF BACK TO BACK TACK-ON CURBS YELLOW. INSTALL ONE RPM PER 20' LENGTH OF CURB ON EXISTING ISLANDS/CURBS, WITHIN PROJECT LIMITS. REPAINT CURBS AND REPLACE MISSING RPM'S.
 - INSTALL ADDED LEFT TURN LANE (RPM'S) PER USD 246.
 - INSTALL PEDESTRIAN CROSSING SIGN (W11-2) 36"x36" AND "AHEAD" SIGN (W16-9P) 24"x18" - FLOURESCENT GREEN.
 - INSTALL "ARROW" LEGEND (NDOT TYPE 2 FILM). REF: USD 246.
 - INSTALL STOP BAR (NDOT TYPE 2 FILM) PER USD 254A.
 - INSTALL LANDSCAPING AND IRRIGATION. SEE LANDSCAPING PLANS L-1, L-2 & L-3. SEE IRRIGATION PLANS IR-1, IR-2, IR-3, IR-4 & IR-5.
 - INSTALL WATER SERVICE. INSTALL 1" WATER METER AND 1" RPPA PER UDAC PLANS 4 AND 8.
 - INSTALL DETECTABLE TACTILE WARNING STRIP PER USD 235.
 - INSTALL YIELD BAR (NDOT TYPE 2 FILM) PER NDOT DWG. T-381.3.
 - CONSTRUCT BACK TO BACK TACK-ON CURBS. REF: USD 220.
 - INSTALL SIGN POST AND "LEFT TURN ONLY" SIGN (R3-5L) PER USD 249.
 - INSTALL SIGN POST AND "ONE WAY" SIGN (R6-1(R)) PER USD 249.
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 - CONSTRUCT TYPE "L" C&G PER USD 216 (MODIFIED FOR NONSTANDARD SEE DETAIL "M" ON SHEET P4).
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 - CONSTRUCT TYPE "L" C&G PER USD 216 (MODIFIED FOR NONSTANDARD SEE DETAIL "M" ON SHEET P4).
 - INSTALL "YIELD" SIGN (R1-5) 36"x36".
 - CONSTRUCT 24" SD TYPE 1ST FOUNDATION PER USD 717. INSTALL 15' POLE PER USD 806 [ACTUAL LOCATIONS OF POLES TO BE FIELD VERIFIED DURING CONSTRUCTION]. INSTALL PEDESTRIAN-ACTIVATED, SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM W/ PED. CROSSING SIGN (W11-2) 36"x36" ARROW SIGN (W16-7P) 24"x18" FLOURESCENT GREEN AND PUSH BUTTON SIGN (R10-25) 5"x7".
 - 3/4" OPEN GRADE (LIMITS DETERMINED BY NDOT INSPECTOR).

APPROVED FOR CONSTRUCTION

David H. Hildebrand
Las Vegas Valley Water District Engineering Services Manager
Project No. 116055 Date: 02/04/14

REVISIONS	NO.	DATE	DESCRIPTION	APP'D

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

CITY ENGINEER:
MARK SORENSEN, P.E.

DESIGNED BY: GJJ
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CHARLESTON BOULEVARD
MEDIAN ISLAND LANDSCAPING
IMPROVEMENT PLAN
"CH" 35+00.00 TO "CH" 44+00.00

SHEET:
P3
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DRAWING NO.
107V5221

1/29/14