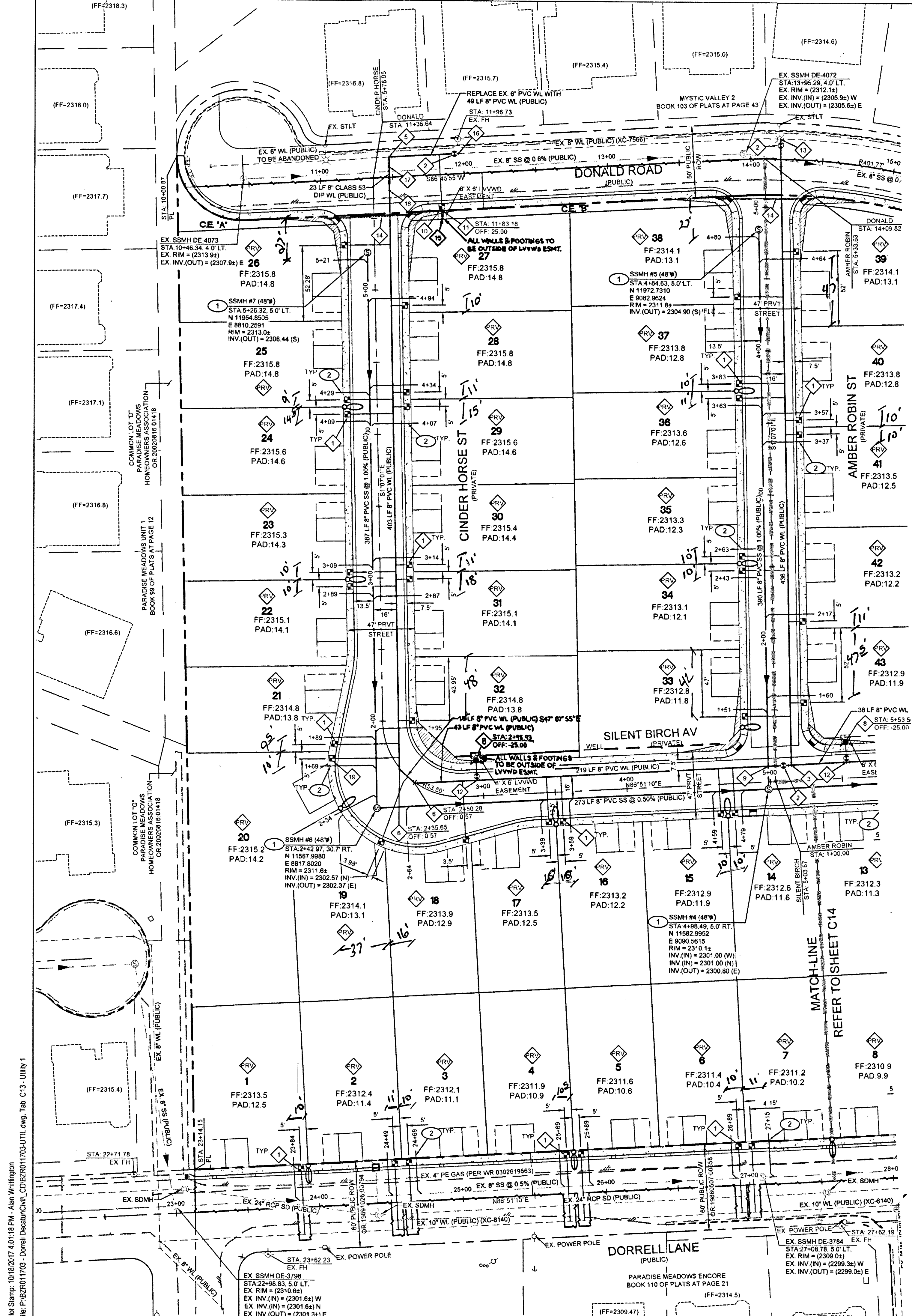




WATER CONSTRUCTION NOTES

- 1. INSTALL 3/4" WATER METER (DOMESTIC) PER UDACS PLATE #1.
- 2. INSTALL 8" GATE VALVE PER UDACS PLATES #30 AND #39.
- 3. INSTALL 8" TEE W/ THRUST BLOCK PER UDACS PLATES #31.
- 4. INSTALL 10" X 8" TEE W/ VALVE PER UDACS PLATE #30, 31, 39.
- 5. INSTALL 8" 90° BEND W/ THRUST BLOCK PER UDACS PLATE #31.
- 6. INSTALL 8" 45° BEND W/ THRUST BLOCK PER UDACS PLATE #31.
- 7. NOT USED.
- 8. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE #40.
- 9. MAINTAIN SEPARATION BETWEEN WATER MAIN AND SANITARY SEWER PIPE PER UDACS STANDARD 2.22.02A.
- 10. INSTALL 3/4" WATER METER (IRRIGATION) PER UDACS PLATE #4.
- 11. INSTALL 3/4" RPPA (IRRIGATION) PER UDACS PLATE #6 WITH CURB SIOP PER DETAIL "4" ON SHEET C5.
- 12. INSTALL 6" X 8" TEE PER UDACS PLATE #31.
- 13. 8" X 8" TAPPING SLEEVE W/ TAPPING VALVE PER UDACS PLATE #34, 39, & 2.24.01A.
- 14. INSTALL 2 - 6" IRRIGATION SLEEVES.
- 15. INSTALL CURB STOP IN 2" BLOWOFF BOX.
- 16. CONNECT TO EXISTING 8" X 6" TEE.
- 17. INSTALL STEEL CASING PER UDACS PLATE #22.
- 18. INSTALL PVC TO DIP COUPLING.
- 19. INSTALL 3/4" WATER METER (DOMESTIC) PER UDACS PLATE #3.
- 20. PRESSURE REDUCING VALVE.

SEWER CONSTRUCTION NOTES

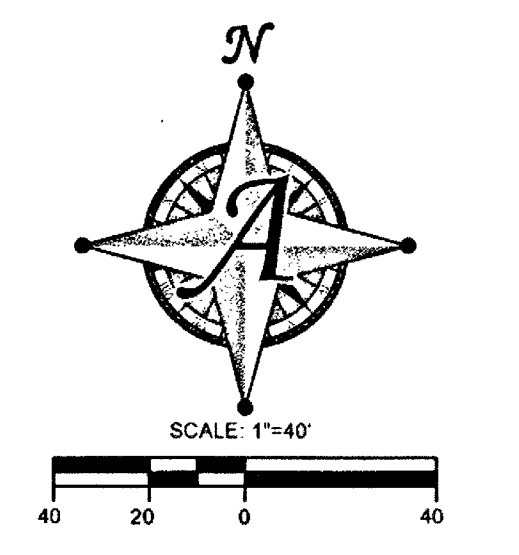
- 1. INSTALL 48" STANDARD PRECAST MANHOLE WITH 24" SINGLE LID PER DCSWCS DWG. NO. 2012.
- 2. INSTALL 4" PVC SEWER LATERAL @ MINIMUM 2% SLOPE. 4" SEWER WYE PER DCSWCS SD-2 & SD-2S. SIBB AND CAP 4" SEWER LATERAL 5' PAST PROPERTY LINE.
- 3. INSTALL 48" CAST-IN-PLACE MANHOLE PER DCSWCS DWG. SD-4, SD-7, & SD-9. SEE CAST-IN-PLACE MANHOLE NOTE.

UTILITY NOTES:

- SEWER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH "DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS" LATEST EDITION, WHERE APPLICABLE.
- ALL WATERLINE FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS" (UDACS) LATEST EDITION.
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS) UNDER CLARK COUNTY JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLARK COUNTY SPECIFICATIONS. ALL MATERIALS USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
- FOR ANY UTILITY CUTS, TRENCH BACKFILL PER CALSDS #503 THAT APPLIES (SEE NEW RTO SPEC).
- DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- ADJUST ALL WATER VALVES BOXES TO FINISHED GRADE PER UDACS PLATE NO. 39. VALVE SHALL BE ACCESSIBLE AT ALL TIMES.
- ADJUST ALL MANHOLES TO FINISHED GRADE.
- ADJUST ALL EXISTING UTILITY BOXES/VAULTS TO FINISHED GRADE.
- CONTRACTOR TO VERIFY ALL EXISTING UTILITIES CROSSING PROPOSED UTILITIES PRIOR TO CONSTRUCTION.
- ENTIRE PROJECT SITE AND ALL PROPOSED LINES ARE PART OF THE 2538 PRESSURE ZONE SYSTEM.
- NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT.
- GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPE MEDIANS.
- ELEVATION OF PROPOSED AND EXISTING GAS MAINS ARE NOT KNOWN.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE #15.
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.
- ALL WATER MAINS TO BE INSTALLED PER UDACS PLATE #17.
- PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.
- THE PUBLIC AND/OR PRIVATE FIRE HYDRANT(S) USED TO OBTAIN THE FIRE FLOW ARE.
- THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSIG. THE UNIFORM PLUMBING CODE REQUIRES THE INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE-REDUCING VALVES BE INSTALLED WHENEVER TEN PRESSURE EXCEEDS 80 PSIG. PRIVATE DEVELOPERS RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.
- SERVICE LATERALS FOR LOTS 1-10 WILL BE TAPPED ON EXISTING MAIN BY OWNER'S CONTRACTOR UNDER DIRECTION OF THE LVVWD.

FIRE FLOW CALCULATION

USE/OCCUPANCY	R-3
TYPE OF CONSTRUCTION	VB
FIRE FLOW: 1750 GPM @ 20 PSI	
AUTOMATIC FIRE SPRINKLERS	NO
NFPA 13, 13R, 13D, ESFR	
SQUARE FOOTAGE	3909 SF
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	2
# OF STORIES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
# OF HYDRANTS INSTALLED	3



CAST-IN-PLACE SEWER MANHOLE BASE

CAST-IN-PLACE MANHOLE BASE REQUIRED TO CURE FOR A MINIMUM OF 7 DAYS BEFORE MANHOLE COMPONENTS CAN BE SET

WATER MAIN JOINT DEFLECTION (PVC, 4"-24")

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1.150 FEET, PER UDACS 2.07.01 AND 2.07.02

FOR CHANGED IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION FITTINGS SHALL BE USED.

REDUCED PRESSURE PRINCIPLE ASSEMBLY

(b) 1" (IRRIGATION)
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE #6. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(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.

CONTROLLED LOW STRENGTH MATERIAL (CLSM)

PROTECT WATERLINES IN PLACE. WHEREVER A WATERLINE IS ABOVE STORM DRAIN OR SEWER WHERE COMPACTION REQUIREMENTS UNDER A WATERLINE CANNOT BE MET, BACKFILL TRENCH WITH CLASS II CONTROLLED LOW STRENGTH MATERIAL (CLSM) TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY. ADDITIONAL HEALTH REGULATIONS MAY APPLY PER UDACS 2.22.

EASEMENT WITH TREES, SHRUBS, DECORATIVE ROCK, BLOCK WALL, OR FENCE

TREES, SHRUBS, OR DECORATIVE ROCKS, AND ANY BLOCK WALL OR OTHER FENCE MATERIAL, SHALL BE DESIGNED AND CONSTRUCTED AROUND THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VALVE(S), BACKFLOW ASSEMBLIES, AND PIPING FROM THE ADJACENT RIGHT-OF-WAY.

ALL ON-SITE PRIVATE STREETS ARE PUBLIC UTILITY EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

SIGHT VISIBILITY RESTRICTION ZONES

CAUSED DWG. NO. 2012

SIGHT VISIBILITY ZONE NOTE

NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES, AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPE MEDIANS.

PLEASE REFER TO TRAFFIC SHEETS C15 & C16 FOR SIGHT VISIBILITY ZONE DIMENSIONS.

WATER METER NOTE

57 RESIDENTIAL LOT WATER METERS ARE TO BE 3/4" 2 COMMON LOT WATER METERS ARE TO BE 3/4".

GRADING NOTE

MINIMUM 24" OF COVER PER UDACS 2.08.04 GRADING MUST BE COMPLETED PRIOR TO WATER LINE INSTALLATION.

FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINT OF CROSSINGS.
- MAINTAIN MINIMUM 3" PARALLEL SEPARATION.

THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: SLV90 24NCE6

RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF DECATUR BOULEVARD AND DORRELL LANE.

ELEVATION = 702.412 METERS (NAV88 2008 ADJUSTMENT)

ELEVATION = 704.51 US SURVEY FEET (NAV88 2008 ADJUSTMENT)

BASIS OF BEARING

NORTH 00°47'07" WEST, BEING THE BEARING OF EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 80 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS RECORDED IN FILE 106 OF SURVEYS AT PAGE 81, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.

DISCLAIMER NOTE

THE UNDERGROUND UTILITIES AS SHOWN HEREON HAVE BEEN LOCATED FROM OBSERVED FIELD SURVEY EVIDENCE AND EXISTING DRAWINGS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PLANS PROVIDED BY THE CLIENT, UTILITY COMPANIES, AND MUNICIPAL AGENCIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

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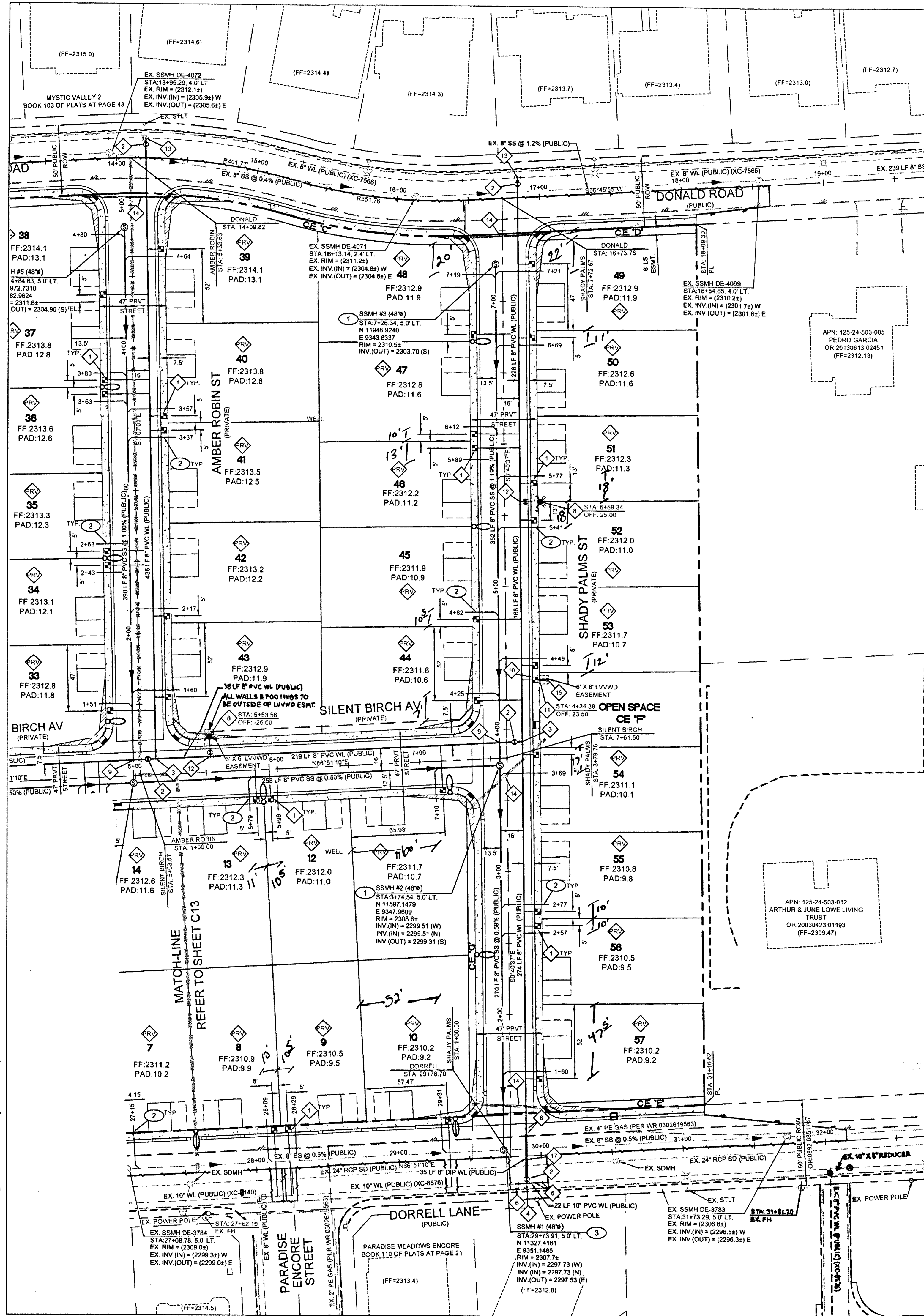
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3. INSTALL 8" TEE W/ THRUST BLOCK PER UDACS PLATES #31
4. INSTALL 10" X 8" TEE W/ VALVE PER UDACS PLATE #30, 31, 39
5. INSTALL 8" 90° BEND W/ THRUST BLOCK PER UDACS PLATE #31
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7. NOT USED
8. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE #40
9. MAINTAIN SEPARATION BETWEEN WATER MAIN AND SANITARY SEWER PIPE PER UDACS STANDARD 2.22.02A
10. INSTALL 3/4" WATER METER (IRRIGATION) PER UDACS PLATE #4
11. INSTALL 3/4" RPPA (IRRIGATION) PER UDACS PLATE #8 WITH CURB STOP PER DETAIL "4" ON SHEET C5
12. INSTALL 8" X 8" TEE PER UDACS PLATE #31
13. 8" X 8" TAPPING SLEEVE W/ TAPPING VALVE PER UDACS PLATE #34, 39, & 2.24.01A
14. INSTALL 2" - 6" IRRIGATION SLEEVES
15. INSTALL CURB STOP IN 2' BLOWOFF BOX
16. CONNECT TO EXISTING 8" X 8" TEE
17. INSTALL STEEL CASING PER UDACS PLATE #22
18. INSTALL PVC TO DIP COUPLING
19. INSTALL 3/4" WATER METER (DOMESTIC) PER UDACS PLATE #3
20. PRESSURE REDUCING VALVE

SEWER CONSTRUCTION NOTES

1. INSTALL 48" STANDARD PRECAST MANHOLE WITH 24" SINGLE LID PER DCSWCS DWG SD-1A, SD-2, SD-1B, SD-4 & SD-5
2. INSTALL 4" PVC SEWER LATERAL @ MINIMUM 2.0% SLOPE, 4" SEWER WYE PER DCSWCS SD-23 & SD-25. STUB AND CAP 4" SEWER LATERAL 5' PAST PROPERTY LINE
3. INSTALL 48" CAST-IN-PLACE MANHOLE PER DCSWCS DWG SD-4, SD-7, & SD-9. SEE CAST-IN-PLACE MANHOLE NOTE.

UTILITY NOTES:

- SEWER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH "DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS" LATEST EDITION, WHERE APPLICABLE.
- ALL WATERLINE FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS" (UDACS) LATEST EDITION.
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS) UNDER CLARK COUNTY JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLARK COUNTY SPECIFICATIONS, OR WILL BE AN APPROVED EQUIVALENT.
- FOR ANY UTILITY CUTS, TRENCH BACKFILL PER CCAUSD #503 THAT APPLIES (SEE NEW RTO SPECS).
- DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- ADJUST ALL WATER VALVES BOXES TO FINISHED GRADE PER UDACS PLATE NO. 39. VALVE SHALL BE ACCESSIBLE AT ALL TIMES.
- ADJUST ALL MANHOLES TO FINISHED GRADE.
- CONTRACTOR TO VERIFY ALL EXISTING UTILITIES CROSSING PROPOSED UTILITIES PRIOR TO CONSTRUCTION.
- ENTIRE PROJECT SITE AND ALL PROPOSED LINES ARE PART OF THE 2538 PRESSURE ZONE SYSTEM.
- NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES AND STREETLIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPE MEDIANS.
- ELEVATION OF PROPOSED AND EXISTING GAS MAINS ARE NOT KNOWN.
- INSTALL PIPE LINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE #15.
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.
- ALL WATER MAINS TO BE INSTALLED PER UDACS PLATE #17.
- PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.
- THE PUBLIC AND/OR PRIVATE FIRE HYDRANT(S) USED TO OBTAIN THE FIRE FLOW ARE.
- THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THE INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE-REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRVS ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.
- SERVICE LATERALS FOR LOTS 1 - 10 WILL BE TAPPED ON EXISTING MAIN BY OWNER'S CONTRACTOR UNDER DIRECTION OF THE LVVWD.

THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPROVE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

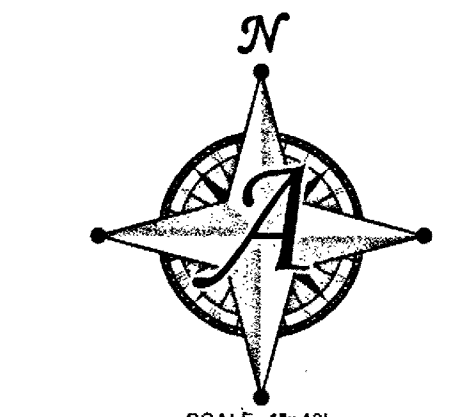
10-19-17
LAS VEGAS FIRE & RESCUE

APPROVED FOR CONSTRUCTION

Shane Dean for DTM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
PROJECT NO. 125821 DATE: 11-09-17
LVVWD APPROVED FIRE FLOW 1750 GPM AT 20 PSI RESIDUAL

FIRE FLOW CALCULATION

USE/OCCUPANCY: R-3
TYPE OF CONSTRUCTION: VB
FIRE FLOW: 1750 GPM @ 20 PSI
AUTOMATIC FIRE SPRINKLERS: NO
NFPA 13: 13R, 13D, ESFR
SQUARE FOOTAGE: 2909 SF
LARGEST AREA BETWEEN 4 HOUR WALLS: N/A
BUILDING HEIGHT: 25'
OF STORIES INCLUDING BASEMENT: 2
HIGH PILED COMBUSTIBLE STORAGE: NO
OF HYDRANTS INSTALLED: 3



CAST-IN-PLACE SEWER MANHOLE BASE

CAST-IN-PLACE MANHOLE BASE SHALL BE TAKEN FROM A SERVICE BEFORE MAIN COMPONENTS CAN BE SET.

WATER MAIN JOINT DEFLECTION (PVC, 4"-24")

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1:50 FEET, PER UDACS 2.07.01 AND 2.07.02.

FOR CHANGED IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION FITTINGS SHALL BE USED.

REDUCED PRESSURE PRINCIPLE ASSEMBLY

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE #9. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(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.

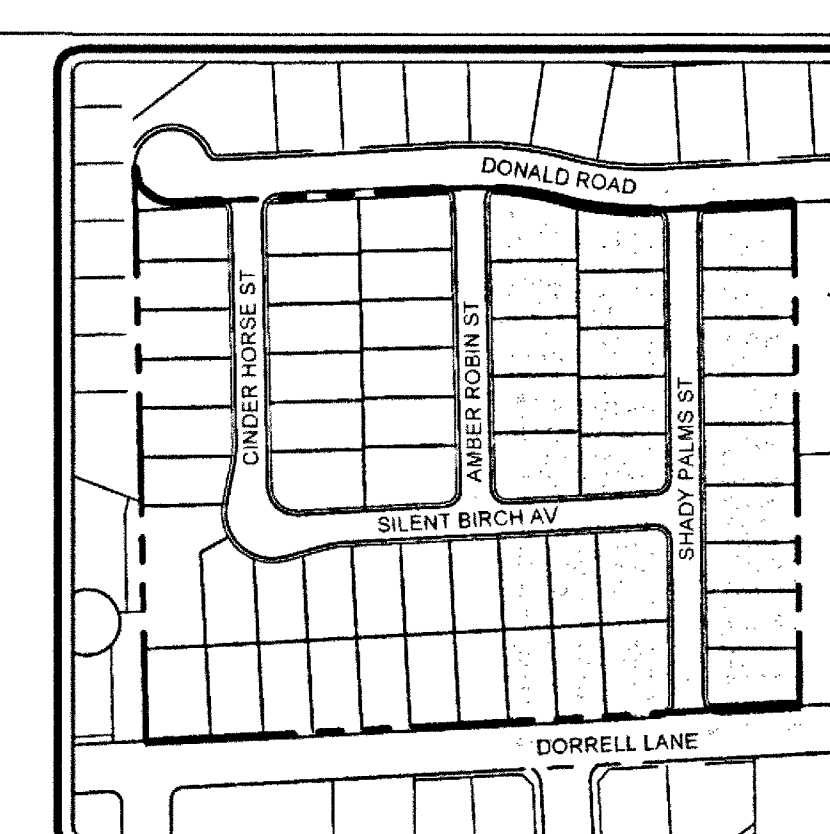
CONTROLLED LOW STRENGTH MATERIAL (CLSM)

PROTECT WATERLINES IN PLACE. WHEREVER A WATERLINE IS ABOVE STORM DRAIN OR SEWER WHERE COMPACTION REQUIREMENTS UNDER A WATERLINE CANNOT BE MET, BACKFILL TRENCH WITH CLASS 1 CONTROLLED LOW STRENGTH MATERIAL (CLSM) TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY. ADDITIONAL HEALTH REGULATIONS MAY APPLY PER UDACS 2.22.

EASEMENT WITH TREES, SHRUBS, DECORATIVE ROCK, BLOCK WALL, OR FENCE

TRULY'S SHRUBS, OR DECORATIVE ROCKS, AND ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VAULTS, BACKFLOW ASSEMBLIES, AND PIPING FROM THE ADJACENT RIGHT-OF-WAY.

MH PER PLAN



UTILITY LEGEND

- EXISTING RIGHT-OF-WAY/PROPERTY LINE
- EXISTING WATER LINE (SIZE PER PLAN)
- EXISTING SEWER LINE (SIZE PER PLAN)
- PROPOSED WATER LINE (SIZE PER PLAN)
- PROPOSED SANITARY SEWER LINE (SIZE PER PLAN)
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER METER
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER WYE (SIZE AND DIRECTION PER PLAN)
- EXISTING SEWER MANHOLE
- PROPOSED 150W STREETLIGHT
- PROPOSED 100W STREETLIGHT
- EXISTING LIGHT W/ POLE & BASE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

ALL ON-SITE PRIVATE STREETS ARE PUBLIC UTILITY EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA

SIGHT VISIBILITY RESTRICTION ZONES

CAUSD DWG. NO. 2012
SIGHT VISIBILITY ZONE NOTE
NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPE MEDIANS.
PLEASE REFER TO TRAFFIC SHEETS C15 & C16 FOR SIGHT VISIBILITY ZONE DIMENSIONS.

WATER METER NOTE

57 RESIDENTIAL LOT WATER METERS ARE TO BE 3/4".
2 COMMON LOT WATER METERS ARE TO BE 1".

GRADING NOTE

MINIMUM 24" OF COVER PER UDACS 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATER LINE INSTALLATION.

FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINT OF CROSSING.
- MAINTAIN MINIMUM 3' PARALLEL SEPARATION.

THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPROVE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK STATION: 50V90 24NE6
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF DECATUR BOULEVARD AND DORRELL LANE.
ELEVATION = 702.412 METERS (NAVD88 2008 ADJUSTMENT)
ELEVATION = 2304.51 US SURVEY FEET (NAVD88 2008 ADJUSTMENT)

BASIS OF BEARING

NORTH 00°47'07" WEST, BEING THE BEARING OF EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHERLY QUARTER (NE 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, 12 D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS RECORDED IN FILE 106 OF SURVEYS AT PAGE 81, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.

DISCLAIMER NOTE

THE UNDERGROUND UTILITIES AS SHOWN HEREON HAVE BEEN LOCATED FROM OBSERVED FIELD SURVEY EVIDENCE AND EXISTING DRAWINGS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PLANS PROVIDED BY THE CLIENT, UTILITY COMPANIES, AND MUNICIPAL AGENCIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

Call before you dig
Avoid cutting underground utility lines. It's costly.

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CLARK COUNTY TRAFFIC OPERATIONS

Call before you dig
Avoid hitting overhead power lines. It's costly.

CALL 811

1-800-227-2600
CLARK COUNTY TRAFFIC OPERATIONS

Call before you dig
Avoid hitting overhead power lines. It's costly.

CALL 811

1-702-455-8000
CLARK COUNTY TRAFFIC OPERATIONS

UTILITY PLAN 2

BY: [Signature]

DATE: 10-18-2017

DESIGNED: ALW

CHECKED: DCL

PROJECT #: B20171703

SHEET TITLE: UTILITY

SHEET NUMBER: C14

CLV# 10715067-1

Actus

3203 E. Warm Springs Rd., Suite 400
Las Vegas, NV 89120
www.actus-nv.com
(702) 586-9286

Engineering - Surveying - Consulting - Planning

DECATUR & DONALD I

BEAZER HOMES

CITY OF LAS VEGAS, NEVADA

ASB-VLCS