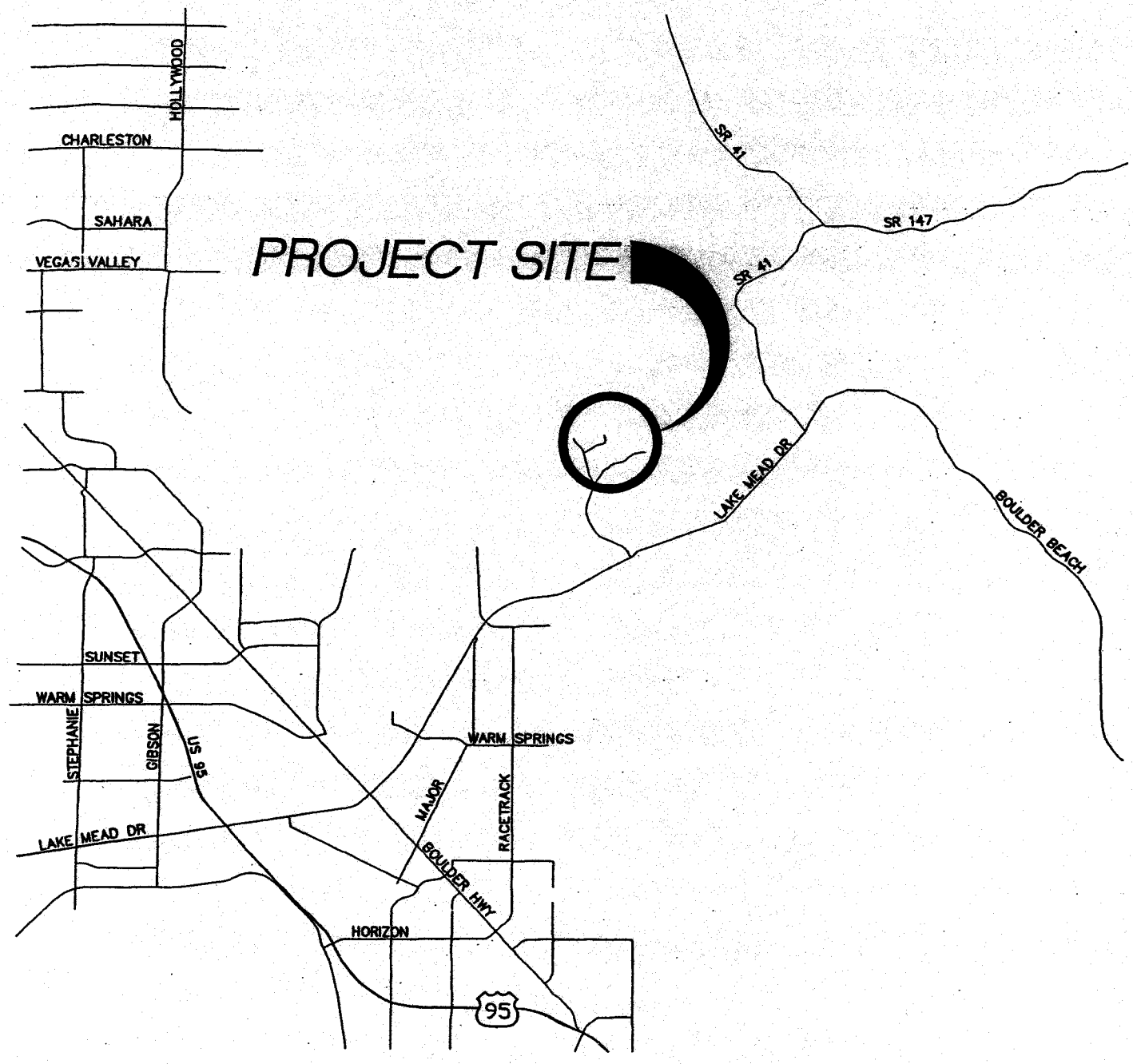

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NOT TO SCALE

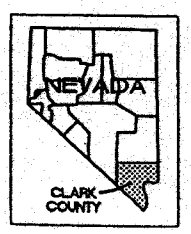
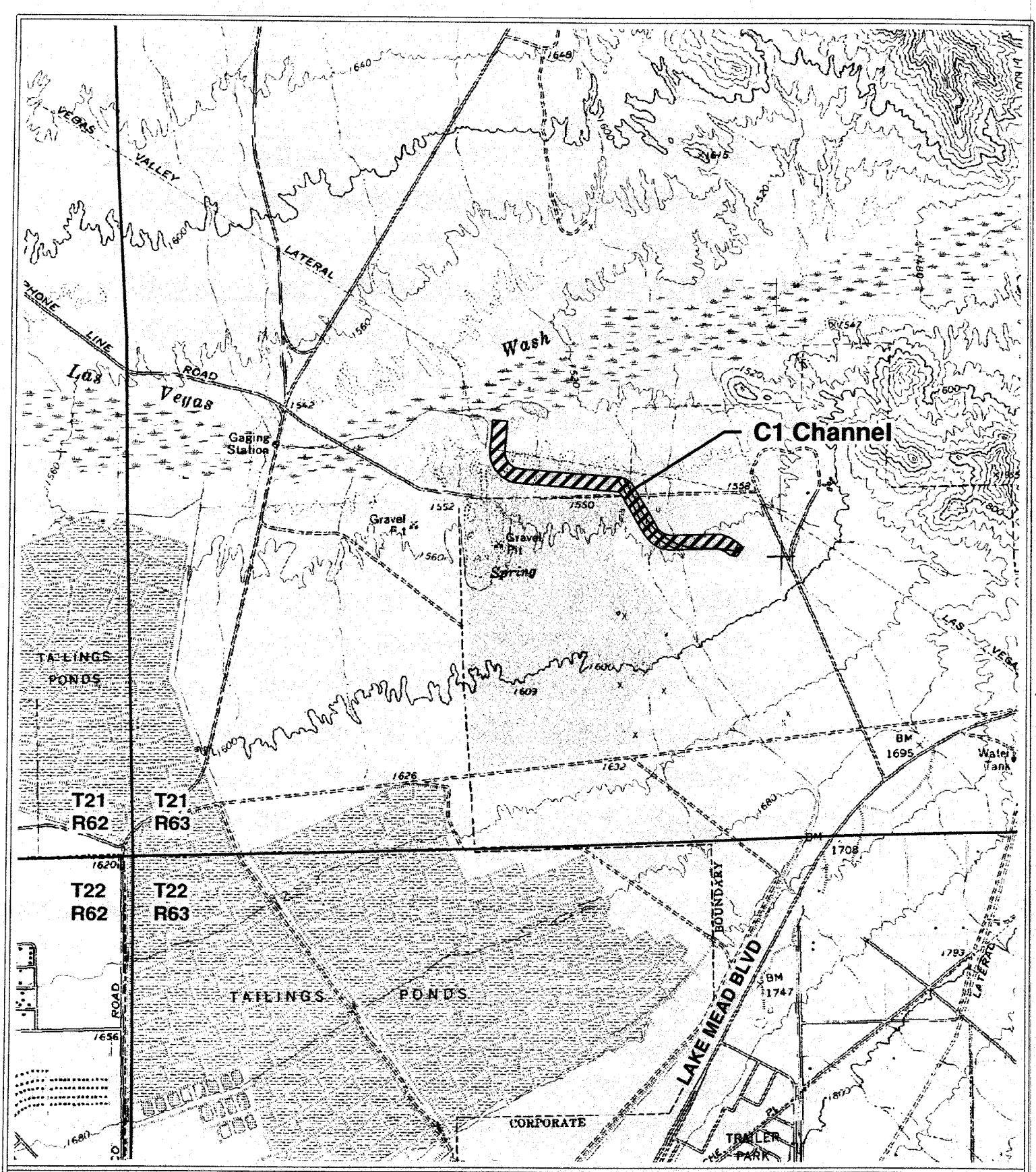


Figure 1.
C-1 Channel
Project Location

PBSJ
901 N. Green Valley Pkwy, Suite 100
Henderson, Nevada 89074-7105
Telephone: 702/263-7275
Fax: 702/263-7208
ENGINEERING • PLANNING • SURVEYING • CONSTRUCTION SERVICES

K:\PROJECTS\C-1 511197\Reports\Section 14 - Sept 01\Figures/Figure 2-1.pdf



N

0 2,000 4,000

Feet

1 inch equals 2,000 feet

Source: 24k USGS Quad (Henderson)

NEVADA

CLARK COUNTY

Figure 2
Location of C1 Channel

PBS&J
901 N Green Valley Pkwy, Suite 100
Henderson, Nevada 89074-6139
Phone: 702/263-7275
Fax: 702/263-7200

4/18/02 MC P:\Projects\PubWrks\C1Channel\mxd\fig2_C1location.mxd

Call before you Overhead 1-702-566-6111

Call before you Dig 1-800-227-2600

TUSCANY IMPROVEMENT PLANS
C-1 CHANNEL EXTENSION
PHASE 3 IMPROVEMENTS

A PORTION OF SECTION 29, TOWNSHIP 21 SOUTH, RANGE 63 EAST
MOUNT DIABLO MERIDIAN, CITY OF HENDERSON, CLARK COUNTY, NEVADA

LEGAL DESCRIPTION

A PORTION OF SECTION 32, TOWNSHIP 21 SOUTH, RANGE 63 EAST, M.D.M., CITY OF HENDERSON, CLARK COUNTY, NEVADA.

BASIS OF BEARING

SOUTH 89°37'48" WEST – BEING THE SOUTH LINE OF THE SOUTHEAST QUARTER (SE1/4) OF SECTION 32, TOWNSHIP 21 SOUTH, RANGE 63 EAST, M.D.M., CITY OF HENDERSON, CLARK COUNTY, NEVADA AS SHOWN ON THE MAP THEREOF IN FILE 57 OF SURVEYS, PAGE 96, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF HENDERSON BENCH MARK NO. 220 DATED 11/02/93
DESC: CITY OF HENDERSON BRASS CAP IN THE TOP OF THE CURB ON THE SOUTHEAST CORNER OF OLSEN STREET AND REDROCK STREET.
ELEVATION IN METERS: 508.195 = 1667.303 FEET
C.O.H. MAIG 98
CONVERSION FACTOR: METERS X 3937/1200 = U.S. FEET
PER C.O.H. BOOK OF BENCHMARKS DATED APRIL 1997.

OWNER / DEVELOPER

OWNER
CONTACT: JEFF THOMPSON
COMMERCE ASSOCIATES, LLC
2600 N. GREEN VALLEY PKWY
HENDERSON, NV 89014
(702) 456-8744

DEVELOPER
CONTACT: JEFF THOMPSON
COMMERCE ASSOCIATES, LLC
2620 N. GREEN VALLEY PKWY
HENDERSON, NV 89014
(702) 456-8744

ENGINEER / CONSULTANT

CIVIL
CONTACT: LEE C. FARRIS, P.E.
PBS&J, INC., 501 N. GREEN VALLEY PKWY., SUITE 100, HENDERSON, NEVADA 89074
(702) 263-7275

STRUCTURAL
CONTACT: JASON P. SOUTH, P.E.
SPECIALTY STRUCTURES ENGINEERING AND DESIGN COMPANY
1553 E. LINCOLN ROAD
IDAHO FALLS, IDAHO 83401
(208) 524-0800

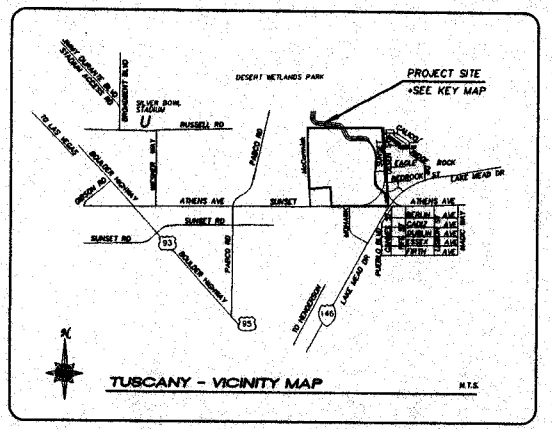
SHEET INDEX

CIVIL

1. C-1 CHANNEL COVER SHEET
2. GENERAL NOTES, LEGEND, ABBREVIATIONS, AND ESTIMATE OF QUANTITIES
3. C-1 CHANNEL SURVEY CONTROL PLAN
4. TYPICAL CHANNEL SECTIONS
5. C-1 CHANNEL PLAN AND PROFILE STA 75+27.77 TO STA 79+00.00
6. C-1 CHANNEL PLAN AND PROFILE STA 79+00.00 TO STA 86+00.00
7. C-1 CHANNEL PLAN AND PROFILE STA 86+00.00 TO STA 94+00.00
8. MISCELLANEOUS DETAILS

STRUCTURAL

* NOT INCLUDED AS A PART OF THIS PACKAGE



TUSCANY
Vintage Golf Course Living

APPROVALS

KURT SEGLER, P.E. — DATE
UTILITIES SERVICES MANAGER
CITY OF HENDERSON

MICHAEL W. BOUSE — DATE
DIRECTOR OF BUILDING AND SAFETY
CITY OF HENDERSON

JOHN E. BARTELS, P.E. — DATE
CITY TRAFFIC ENGINEER
CITY OF HENDERSON

JAMES MADDEN — DATE
FIRE MARSHAL
CITY OF HENDERSON

CURT CHANDLER, P.E. — DATE
FLOOD CONTROL COORDINATOR
CITY OF HENDERSON

NEVADA POWER COMPANY — DATE

NOTE:
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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG - 1 (800) 227-2600.

SOUTHWEST GAS CORPORATION — DATE

SPRINT — DATE

NOTE:
THE AFFIXED SPRINT NEVADA 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 STATUES, AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

SOUTHERN NEVADA WATER AUTHORITY — DATE

COX COMMUNICATIONS LAS VEGAS, INC — DATE

APPROVAL

NEW DEVELOPMENT ENGINEER – KEN KOSHIRO, P.E. — DATE

CITY APPROVAL OF THE IMPROVEMENT PLANS IS GRANTED FOR ONE (1) YEAR ONLY. PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS, CITY OF HENDERSON, IF WORK IS NOT COMPLETED BY _____, 20____

THIS SET OF IMPROVEMENT PLANS IS CERTIFIED TO CONFORM TO THE REQUIREMENTS OF THE TRAFFIC STUDY ACCEPTANCE LETTER.

N/A
LEE C. FARRIS — P.E. NO. 13691 — DATE

"APPROVAL OF THESE PLANS BY THE CITY OF HENDERSON IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHTS-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS, AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY IDENTIFIED AS "DEVIATIONS FROM STANDARDS". THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN "DEVIATIONS FROM STANDARDS" IN FAVOR OF THE UNIFORM STANDARDS DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA, NEVADA".

REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-301
SCALE: HORIZ.: NONE VERT.: NONE

PBS&J — 501 North Green Valley Pkwy, Suite 100, Henderson, Nevada 89014, Telephone: 702/263-7275, Fax: 702/263-7200
ENGINEERING • PLANNING • SURVEYING • CONSTRUCTION SERVICES

SEAL — LEE C. FARRIS, CIVIL, NO. 13691

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION
- PHASE 3 IMPROVEMENTS -
C-1 CHANNEL
COVER SHEET

XXXX

DRAWING NO. C1 — 1 / 8

CITY OF HENDERSON GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFFSITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, LATEST EDITION, AND THE UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, OFFSITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, LATEST EDITION.
2. APPLICATION FOR INSPECTION BY THE CITY OF HENDERSON PUBLIC WORKS SHALL BE MADE BY THE CONTRACTOR AT LEAST 24 HOURS BEFORE THE INSPECTION SERVICES WILL BE REQUIRED. 565-2138 OR 565-2140.
3. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE COMPLETED WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH SUBDIVISION CONSTRUCTION.
5. PRIOR TO FINAL ACCEPTANCE, BOND RELEASES AND A CERTIFICATE OF OCCUPANCY, A CERTIFIED LEGIBLE AS-BUILT DRAWING MUST BE SUBMITTED TO THE CITY OF HENDERSON. AS-BUILT MUST SHOW ALL CHANGES AND ACTUAL FIELD LOCATIONS. IN THE ABSENCE OF CHANGES, A COPY OF APPROVED DRAWINGS WILL BE REQUIRED, STATING "INSTALLED AS PER DRAWINGS", AND CERTIFIED AS SUCH BY THE DEVELOPER'S ENGINEER.
6. APPROVAL OF THESE PLANS IS FOR THE CONSTRUCTION OF OFFSITE IMPROVEMENTS ONLY. ALL ONSITE IMPROVEMENTS, AS DEFINED BY THE CITY OF HENDERSON, INCLUDING BLOCK WALLS, MUST BE APPROVED BY THE BUILDING AND PLANNING DIVISIONS OF THE CITY OF HENDERSON.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITION BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND INGRESS AND EGRESS TO SAID CONSTRUCTION. EXTENT OF TRANSITIONS TO BE DETERMINED BY THE CITY ENGINEER.
8. EXISTING UTILITIES ARE LOCATED ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AND THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND.
9. POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENTS SHOWN WILL BE RELOCATED AT NO EXPENSE TO THE CITY OF HENDERSON.
10. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING No. 235. EXACT LOCATION OF RAMPS SHALL BE DETERMINED IN THE FIELD BY A CITY INSPECTOR, OR AS SHOWN ON PLAN.
11. CURB AND GUTTER WITH A GRADE OF LESS THAN FIVE-TENTHS OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
12. ALL GRADING SHALL CONFORM TO THE SOILS REPORT:
    ENGINEER: GEOTEK, INC.-NEVADA
    DATE: MAY 1, 1998
    JOB NUMBER: 1538-LV
13. EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PRELIMINARY GEOTECHNICAL REPORT.
14. ALL STREET STRUCTURAL SECTIONS SHALL BE PER THE RECOMMENDATIONS OF THE SOILS ENGINEER BASED ON CBR OR R-VALUES. NO PAVING OR BASE WORK SHALL COMMENCE UNTIL A STREET STRUCTURAL SECTION IS APPROVED BY THE CITY ENGINEER, CITY OF HENDERSON.
15. 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 ENCROACHMENTS INTO EXISTING PUBLIC STREETS IMMEDIATELY AFTER THE FIRST GRADING WORK IS ACCOMPLISHED AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "NEVADA TRAFFIC CONTROL MANUAL"- CURRENT EDITION AND TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES"- CURRENT EDITION AND BE APPROVED BY THE CITY OF HENDERSON BEFORE CONSTRUCTION BEGINS.
16. WHERE EXISTING PAVEMENT IS CUT TO INSTALL UTILITY SERVICE LINES, BACKFILL AND PAVEMENT REPLACEMENT SHALL BE DONE PER STANDARD DRAWING No. 502 AND SECTIONS 206, 207, AND 208 OF THE STANDARD SPECIFICATION ISSUE, LATEST EDITION.
17. ALL STATIONING IS REFERENCED TO CENTERLINE.
18. EXACT LOCATION OF ALL SAWCUT LINES SHALL BE DETERMINED IN THE FIELD BY A CITY OF HENDERSON INSPECTOR.
19. PROTECTION AND REPLACEMENT OF SURVEY MONUMENTS OR PROPERTY STAKES NOT DELINEATED ON THE CONTRACT DRAWINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. REPLACEMENT OF SURVEY MONUMENTS OR PROPERTY STAKES SHALL BE DONE TO THE CITY OF HENDERSON SURVEY SECTION'S SATISFACTION.
20. AFFECTED UTILITY COMPANIES SHALL BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
21. CALL BEFORE YOU DIG: 1-800-227-2600.
22. MODIFICATIONS TO EXISTING UTILITIES SHALL CONFORM TO THE OWNERS' UTILITY STANDARDS AND SPECIFICATIONS.
23. THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE. ALL SUCH IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO THE ENGINEER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.
24. CITY APPROVAL OF THE IMPROVEMENT PLANS IS GRANTED FOR ONE (1) YEAR ONLY. PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS, CITY OF HENDERSON, IF WORK IS NOT COMPLETED BY ____________, 20____.
25. ALL OFFSITE AND ONSITE WATER AND SEWER FACILITIES UP TO WITHIN FIVE (5) FEET OF BUILDINGS SHALL BE CONSTRUCTED TO PUBLIC WORKS STANDARDS.
26. IF SEWER OR WATER LINES WITHIN THE PUBLIC UTILITY EASEMENTS REQUIRE REPAIRS, ALL SUCH REPAIRS WILL BE DONE IN ACCORDANCE WITH PUBLIC WORKS DEPARTMENT STANDARDS. CURBS AND GUTTERS AND SPECIAL PAVING REPAIRS SHALL BE THE RESPONSIBILITY OF THE HOMEOWNER'S ASSOCIATION.
27. IF SIGNS ARE PRESENT ON THIS CONSTRUCTION SITE, PLEASE CONTACT SIGN COMPANY LISTED ON THE SIGN 24 HOURS PRIOR TO COMMENCING CONSTRUCTION IN THE SIGN'S LOCATION. CITY OWNED AND CITY SPONSORED SIGNS (KIOSKS) SHALL BE REMOVED AND REPLACED FOLLOWING CONSTRUCTION IN THEIR ORIGINAL LOCATION IN LIKE-NEW CONDITION AT CONSTRUCTION CONTRACTOR'S EXPENSE. ANY CONTRACTOR HAVING TO REMOVE A SIGN WHICH WAS DAMAGED PRIOR TO THE CONTRACTOR OCCUPYING THE SITE SHALL ARRANGE FOR VERIFICATION OF THE SIGN'S CONDITION BY A CITY INSPECTOR PRIOR TO REMOVAL. ALL SIGNS NOT PREVIOUSLY VERIFIED BY A CITY INSPECTOR SHALL BE ASSUMED TO BE IN LIKE-NEW CONDITION PRIOR TO REMOVAL.

CONDUIT NOTE

ALL CONDUIT (BOX CULVERT, REINFORCED CONCRETE PIPE, CAST-IN-PLACE PIPE, AND/OR CORRUGATED METAL PIPE) SHOWN ON THESE PLANS ARE DESIGNED FOR STANDARD HIGHWAY LOADINGS. THE STANDARD SATISFACTORY IN COVERAGE REQUIREMENTS AS ESTABLISHED BY THE CONDUIT MANUFACTURER MAY NOT ALWAYS BE ADEQUATE DURING CONSTRUCTION WHEN CONSTRUCTION EQUIPMENT FREQUENTLY HEAVIER THAN TRAFFIC LOADS FOR WHICH CONDUIT HAS BEEN DESIGNED, IS TO BE DRIVEN OVER OR CLOSE TO THE BURIED CONDUIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE ADDITIONAL COVERAGE REQUIRED TO AVOID DAMAGE TO THE CONDUIT. THE ADEQUACY OF THE COVERAGE REQUIREMENTS FOR CONDUITS SHALL BE ANALYZED AND CHECKED BY THE CONTRACTOR TO ADDRESS LOADING CONDITIONS IMPOSED BY CONSTRUCTION ACTIVITIES. ANY CONDUIT DAMAGE BY CONSTRUCTION ACTIVITY SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

CITY OF HENDERSON STREET LIGHT REQUIREMENTS

STREETLIGHTS SHALL GENERALLY CONFORM WITH CLARK COUNTY STANDARD DRAWINGS (1988), UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY, AREA (1986), THE NATIONAL ELECTRIC CODE INCLUDING ALL ADDENDAS AND REVISIONS AND THE FOLLOWING:

1. STREETLIGHT POLES SHALL BE NOMINAL 30' LONG, STEEL SHEET 11 GAUGE, FACTORY GALVANIZED INSIDE AND OUTSIDE AS PER ASTM A123. ARMS SHALL BE 8' LONG, 2" STEEL PIPE WITH RISE FOR A LUMINAIRE MOUNTING HEIGHT OF 31'-8". FOUNDATION WILL BE NOT LESS THAN 48" DEEP. POLES SHALL BE VALMONT TYPE 400.1 OR APPROVED EQUIVALENT.

2. HIGH PRESSURE SODIUM LUMINARIES SHALL HAVE AN INTEGRAL CONSTANT WATTAGE BALLAST, 240 VAC AND SHALL BE:

A. FOR 51' OR LESS R/W STREETS: M S TYPE II IES/ANSI DISTRIBUTION, 100-WATT HPS LAMP, WITH GLASS REFRACTOR EQUIVALENT TO "G.E." NO. M2RR10S3M1GMS2.

B. FOR 80' OR 60' R/W STREETS: M S TYPE II IES/ANSI DISTRIBUTION, 150-WATT HPS LAMP, WITH GLASS REFRACTOR EQUIVALENT TO "G.E." NO. M2RR15S3M1GMS3.

C. FOR 100' OR MORE R/W STREETS: M S TYPE II IES/ANSI DISTRIBUTION, 250 WATT HPS LAMP, WITH GLASS REFRACTOR EQUIVALENT TO "G.E." NO. M4RR25S3M1GMS3.

3. THE STREETLIGHTING CIRCUIT SHALL BE 240V, 1 PHASE, 2 WIRE (2 NO. 4 AND 1 NO. 8 GROUND WIRES IN 1-1/4" CONDUIT). 4 NO. 10 GREEN WIRE (GROUND) SHALL CONNECT THE LUMINARIES TO THE POLES GROUND LUG AT THE BASE.

4. STREETLIGHTS SHALL BE LOCATED BEHIND THE SIDEWALK OR IN THE MEDIAN ISLAND. ALTERNATIVE LOCATIONS MAY BE REQUESTED BY THE DEVELOPER AND SHALL BE SHOWN ON THE PLANS SUBMITTED TO THE CITY FOR APPROVAL. SPACING AND LOCATION OF LIGHTS SHALL CONFORM TO THE CLARK COUNTY STANDARD DRAWINGS NO. 300 THROUGH 313, AND 320A WITH ANY ADDENDAS AND REVISIONS AS AMENDED BY THE CITY OF HENDERSON. LAYOUT MUST BE APPROVED BY THE CITY. FIELD LOCATIONS MUST BE INSPECTED AND APPROVED BY THE CITY PRIOR TO DIGGING THE FOUNDATIONS AND TRENCHING FOR CONDUITS.

5. THE DEVELOPER SHALL INSTALL PAD MOUNTED SERVICE POINTS PER CLARK COUNTY STANDARD DRAWINGS NO. 330, 331 LOCATED BEHIND THE SIDEWALK AND 332. PHOTOCELL (TORK NO. 3000 OR APPROVED EQUIVALENT) MUST BE MOUNTED ON THE SIDE WITHIN THE ENCLOSURE. PROPOSED LOCATION OF SERVICE POINTS MUST BE SHOWN ON THE DRAWINGS, SUBJECT TO BE REVISED BY NEVADA POWER COMPANY. DESIGN OF SERVICE POINTS SHALL INCLUDE CONNECTION TO NEVADA POWER COMPANY. THE SERVICE RUN SHALL BE 120/240V, 1 PHASE, 3 WIRE. CIRCUIT BREAKER SECTION WILL BE:

A. 125 AMP SERVICE PEDESTAL:
- a.) 60 AMP DOUBLE POLE/240V - STREETLIGHT CIRCUIT "A".
- b.) 60 AMP DOUBLE POLE/240 V - STREETLIGHT CIRCUIT "B".
- c.) 15 AMP SINGLE POLE/120V - PHOTOCELL.

B. 200 AMP SERVICE PEDESTAL:
- a.) 60 AMP SINGLE POLE/120V - TRAFFIC SIGNAL.
- b.) 30 AMP SINGLE POLE/120V - INTERSECTION LIGHTS.
- c.) 60 AMP DOUBLE POLE/240V- STREETLIGHT CIRCUIT "A".
- d.) 60 AMP DOUBLE POLE/240V - STREETLIGHT CIRCUIT "B".
- e.) 15 AMP SINGLE POLE/120V - PHOTOCELL.

6. ALL WIRES SHALL BE THHN/THWN OR THW STRANDED COPPER.

7. STREETLIGHTS MUST BE OPERATING BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED. NEW STREETLIGHTS CANNOT BE CONNECTED TO EXISTING STREETLIGHTING CIRCUITS UNTIL AFTER NEW STREET LIGHTS AND THEIR RELATED WIRING ARE ACCEPTED BY THE CITY.

8. WHEN STREETLIGHTS ARE TO BE CONNECTED TO AN EXISTING CIRCUIT, THE DESIGN ENGINEER MUST CERTIFY THAT THE EXISTING CIRCUIT IS CAPABLE OF HANDLING THE ADDITIONAL CIRCUIT LOAD. EXISTING AND PROPOSED CIRCUIT LOADING MUST BE SHOWN ON THE PLANS. EXISTING CIRCUIT LOAD INFORMATION MAY BE OBTAINED BY CALLING THE CITY OF HENDERSON STREETLIGHTING AND TRAFFIC MAINTENANCE AT (702) 565-2148.

9. CONTRACTORS ARE NOT ALLOWED TO HAVE ANY EQUIPMENT OR PERSONNEL WITHIN 10' OF POWER LINES. CONTACT NEVADA POWER COMPANY FIVE (5) WORKING DAYS IN ADVANCE TO SCHEDULE CREWS TO ASSIST IF WITHIN 10' OF POWER LINES.

10. ALL WALLS OR OTHER OBSTRUCTIONS ARE NOT ALLOWED WITHIN 24" OF THE CENTER OF THE STREETLIGHT POLE PER CLARK COUNTY STANDARD DRAWING NO. 320A.

REVISED 2/98

TRAFFIC NOTES

1. ANY EXISTING TRAFFIC CONTROL DEVICES AND/OR SIGNS SHALL BE MAINTAINED DURING THE PERIOD OF CONSTRUCTION, AND SHALL BE REPOSITIONED AS REQUIRED, PER THE M.U.T.C.D. AND CITY STANDARDS, UPON COMPLETION OF THE PROJECT.
2. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE FOR SUBMITTING TRAFFIC CONTROL/BARRICADING PLANS NOT LESS THAN THREE (3) WORKING DAYS BEFORE OBSTRUCTING AND BEGINNING OF CONSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY, INCLUDING SIDEWALKS. BEFORE ANY WORK IS STARTED IN THE RIGHT OF WAY, THE CONTRACTOR WILL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR WILL INSTALL TEMPORARY GROUND MOUNTED STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND WILL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
3. LOCATION AND DESCRIPTION OF NEW AND EXISTING TRAFFIC CONTROL DEVICES, STREET STRIPING, MEDIAN ISLANDS, DRIVEWAYS AND TRAFFIC SIGNALS MUST BE SHOWN ON PLANS SUBMITTED TO THE CITY FOR APPROVAL. ALL NEW TRAFFIC SIGNS WILL BE FABRICATED WITH HIGH INTENSITY GRADE (CLASS 4) REFLECTIVE SHEETING. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME SIGNS, WILL HAVE "F-CAL" OR 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE FILM.
4. LOCATION AND DESCRIPTION OF NEW AND EXISTING STREET NAME SIGNS MUST BE SHOWN ON PLANS SUBMITTED TO THE CITY FOR APPROVAL. STREET NAME SIGNS WILL COMPLY WITH CLARK COUNTY STANDARD DRAWINGS NO. 249, 250 AND 251. ALL STREET NAME SIGNS WILL BE FABRICATED WITH DIAMOND GRADE VIP (CLASS 8) REFLECTIVE SHEETING. ALL INTERSECTIONS WITH 100' OR GREATER R/W ROADWAYS WILL HAVE THE CITY OF HENDERSON TRAFFIC SHOP THREE (3) WORKING DAYS IN ADVANCE, MONDAY THROUGH THURSDAY, AT 565-2148 TO RECEIVE LOGO TO BE APPLIED BY THE CONTRACTOR TO THE STREET NAME PANELS PER CITY OF HENDERSON STANDARD DETAIL.
5. BLUE REFLECTORIZED PAVEMENT MARKINGS MUST BE INSTALLED AND CURB MUST BE PAINTED AT EVERY FIRE HYDRANT LOCATION PER CITY OF HENDERSON FIRE DEPARTMENT STANDARDS.
6. ALL CONSTRUCTION SIGNING, BARRICADING AND PAVEMENT MARKINGS WILL CONFORM TO THE NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK - 1986 AND TO THE M.U.T.C.D. LATEST EDITION WITH ANY ADDENDAS AND REVISIONS.
7. WHERE STREETS END AT THE PROJECT BOUNDARY, THREE (3) 18" DIAMOND (MINIMUM), REFLECTORIZED, RED PANELS SHALL BE INSTALLED AT THE END OF THE ROADWAY AND MAINTAINED UNTIL ADJOINING PROJECT IS BUILT.
8. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING WILL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.

CITY OF HENDERSON WATER NOTES

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE AGENCY. FOLLOWING WATER PLAN APPROVAL, 48 HOUR NOTICE SHALL BE GIVEN TO THE CITY'S QUALITY CONTROL SECTION PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. OF THE BUSINESS DAY PRIOR TO ANY AGENCY INSPECTION SUBSEQUENT TO THE START OF CONSTRUCTION.
2. ALL WORK SHALL CONFORM TO THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS 1ST EDITION 1996, INCLUDING CITY OF HENDERSON ADDENDA.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT 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 AGENCY.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE COPPER OR TUBE SIZE POLYETHYLENE PIPE WITH AGENCY APPROVED SERVICE SADDLES UNLESS OTHERWISE APPROVED.
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. 14 GAUGE SOLID COPPER WIRE FOR LINE LOCATION SHALL BE REQUIRED UNDER ALL MAINS, ALL SIX (6) INCH DIAMETER AND LARGER SERVICE LATERALS, AND ANY SERVICE LATERAL NOT INSTALLED PERPENDICULAR TO THE MAIN ACCORDANCE WITH STANDARD PLATE NO. 27. (SEE CITY OF HENDERSON ADDENDA.)
9. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE AGENCY'S DISTRIBUTION SYSTEM.
10. ALL METERS SHALL BE PAID FOR BY OWNER/BUILDER AND PROVIDED BY THE CITY. THE ONLY EXCEPTION IS COMBINATION FIRE AND DOMESTIC SERVICES 6" AND LARGER. THOSE METERS SHALL ONLY BE THOSE LISTED ON CURRENT APPROVED MATERIALS LIST. METERS 3" AND LARGER PROVIDED BY THE CITY WILL BE DELIVERED TO SITE BY THE CITY AND INSTALLED BY THE CONTRACTOR. DELIVERY AND/OR SETTING OF METERS IS SCHEDULED THROUGH CUSTOMER SERVICES AT 565-2110.
11. ALL FLANGED FITTINGS TO BE COATED WITH EC-244 AND WRAPPED WITH 120 MIL THICK POLYETHYLENE.
12. ALL VALVE BOXES SHALL HAVE CONCRETE COLLARS AT SURFACE OF PAVED AREAS PER CLARK COUNTY AREA UNIFORM STANDARD DRAWING NUMBER 517.
13. NO OTHER UTILITY LINES MAY BE PLACED IN THE SAME TRENCH WITH WATER LINES.
14. BLUE REFLECTORS AT CENTERLINE OF DRIVING LANE NEAREST TO HYDRANT AND PERPENDICULAR TO ALL FIRE HYDRANTS SHALL BE REQUIRED.
15. ALL WATER LINES INSTALLED ON PROJECT SHALL BE MINIMUM CLASS 150.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL MATERIAL SPILLED ON EXISTING ROADWAYS ON A DAILY BASIS.
17. ANY CONFLICT WITH EXISTING UTILITIES SHALL BE IMMEDIATELY CALLED TO THE ATTENTION OF THE ENGINEER.
18. ALL ONSITE PIPING 4 INCHES IN DIAMETER AND LARGER SHALL BE EITHER PVC C-900 OR DUCTILE IRON PIPE. ALL ONSITE PIPING 2 INCHES IN DIAMETER AND LESS SHALL BE EITHER TUBE SIZE POLYETHYLENE PIPE WITH A 160 PSI WORKING PRESSURE RATING OR COPPER PIPE (EXCEPT SINGLE FAMILY).
19. LANDSCAPING AND IRRIGATION ADJACENT TO VAULTS SHALL BE DRAINED AWAY FROM VAULTS.
20. CONTRACTOR SHALL PROVIDE APPURTENANCES TO PERFORM PRESSURE TEST AND DISINFECTION AS REQUIRED BY UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS.
21. CONSTRUCTION SHALL NOT INTERRUPT SERVICE WITHOUT PRIOR CITY APPROVAL AND PROPER NOTIFICATION. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEEDS BE INSTALLED, WITHOUT AGENCY REIMBURSEMENT. ANY TEMPORARY SERVICE FEED MUST HAVE PRIOR AGENCY APPROVAL.
22. ALL CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE AGENCY'S APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.

FIRE NOTES - PRIVATE SERVICE

1. A PRIVATE FIRE SERVICE MAIN IS THAT PIPE AND ITS APPURTENANCES ON PRIVATE PROPERTY.
   A. BETWEEN A SOURCE OF WATER AND THE BASE OF THE RISER (NOT OVER 6 IN. ABOVE FLOOR) FOR WATER-BASED FIRE PROTECTION SYSTEMS.
   B. BETWEEN A SOURCE OF WATER AND THE BASE ELBOW OF PRIVATE HYDRANTS OR MONITOR NOZZLES.
   C. THE NEVADA STATE FIRE MARSHAL HAS DETERMINED THAT THE UNDERGROUND PORTIONS OF A SPRINKLER SYSTEM ARE DEFINED AS: THAT PORTION OF THE PIPING BETWEEN A SOURCE OF PUBLIC WATER (USUALLY IN A PUBLIC STREET) AND THE BASE OF THE SPRINKLER RISER (NOT OVER 6 IN. ABOVE THE FLOOR).
2. THE UNDERGROUND CONTRACTOR INSTALLING THE PRIVATE FIRE SERVICE MAIN SUPPLYING ANY AUTOMATIC FIRE SPRINKLER SYSTEM MUST BE LICENSED BY THE STATE OF NEVADA, STATE FIRE MARSHAL DIVISION, FOR THE UNDERGROUND INSTALLATION OF SPRINKLER PIPING.
3. THE INSPECTION AND TESTING OF ALL PRIVATE FIRE SERVICE MAINS SHALL BE WITNESSED AND APPROVED BY THE FIRE PREVENTION DIVISION.
4. ALL VALVES CONTROLLING CONNECTIONS TO WATER SUPPLIES AND TO SPRINKLER PIPING SHALL BE LISTED INDICATING VALVES OR AS APPROVED BY THE FIRE PREVENTION DIVISION.
5. ALL VALVES CONTROLLING CONNECTIONS TO WATER SUPPLIES AND TO SPRINKLER PIPING SHALL BE PROTECTED FROM FREEZING WHEN EXPOSED TO TEMPERATURES LESS THAN 40' F. FREEZE PROTECTION SHALL BE PROVIDED IN SUCH A MANNER THAT IT WILL LAST THE LIFETIME OF THE VALVE.
6. ALL VALVES CONTROLLING THE FLOW OF WATER THROUGH A PRIVATE FIRE SERVICE MAIN SUPPLYING WATER FOR AUTOMATIC FIRE SPRINKLER SYSTEMS SHALL BE ELECTRICALLY SUPERVISED WHEN REQUIRED BY THE UNIFORM FIRE CODE. WHEN REQUIRED, VALVE SUPERVISION AND TROUBLE SIGNALS SHALL BE CONNECTED TO A FIRE ALARM PANEL FOR RETRANSMISSION TO AN APPROVED CENTRAL STATION.
7. ALL FIRE DEPARTMENT CONNECTIONS (FDC) FOR FIRE SPRINKLER SYSTEMS SHALL BE LOCATED WITHIN 10.0 FEET OF FIRE HYDRANT.
8. ALL WORK SHALL BE IN ACCORDANCE WITH NFPA 24, STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVE MAINS AND THEIR APPURTENANCES.

CITY OF HENDERSON FIRE HYDRANT SPACING AND LAYOUT

ALL FIRE HYDRANT SYSTEMS SHALL BE INSTALLED IN SUCH A MANNER AS TO PROVIDE THE MAXIMUM PROTECTION AS INTENDED IN THE UNIFORM FIRE CODE. ALL INTERSECTIONS SHALL HAVE A MINIMUM OF ONE (1) HYDRANT INSTALLED A MAXIMUM OF TWENTY (20) FEET FROM A CORNER OF THE INTERSECTION. THIS LOCATION SHALL BE MEASURED FROM THE INTERSECTION OF TWO LINES DRAWN ALONG THE FACE OF THE CURB SECTIONS PERPENDICULAR TO EACH OTHER. ONCE THESE POSITIONS ARE LOCATED, ADDITIONAL HYDRANTS SHALL BE ADDED TO DEVELOP A GRID WITH A MAXIMUM SPACING OF FIVE HUNDRED (500) FEET BETWEEN HYDRANTS IN AREAS OF SINGLE FAMILY DETACHED HOMES ON SIX THOUSAND (6000) SQUARE FEET OR LARGER LOTS. ALL OTHER AREAS SHALL HAVE A MAXIMUM SPACING OF THREE HUNDRED (300) FEET BETWEEN HYDRANTS. ALL HYDRANTS SHALL BE INSTALLED PER THE SPECIFICATIONS IN THE "UNIFORM STANDARD DRAWINGS", LATEST EDITION, DRAWING No. 516, PAGE 136, AS ADOPTED BY THE CITY OF HENDERSON.

EXCEPTION: ANY INTERSECTION THAT MEASURES TWO HUNDRED (200) FEET OR LESS APART MAY HAVE ONE (1) HYDRANT SET AT THE MID POINT BETWEEN THE TWO INTERSECTIONS.

LEGEND

Symbol	Description
EX. W	EXISTING WATERLINE
EX. SS	EXISTING SEWERLINE
W	PROPOSED WATERLINE
SS	PROPOSED SEWERLINE
	1" WATER SERVICE LATERAL W/ 3/4" METER PER UDACS PLATE 1C
	4" SEWER LATERAL
	48" SEWER MANHOLE
	EXISTING SEWER MANHOLE
	EXISTING FIRE HYDRANT ASSEMBLY
	FIRE HYDRANT ASSEMBLY (INCLUDES 12"x6" OR 8"x6" TEE & 6" GATE VALVE)
	GATE VALVE
	BLOW-OFF ASSEMBLY
	NO. 3 PULLBOX
	STREET LIGHT
	EX. STREET LIGHT
	1 1/4" CONDUIT
	SERVICE POINT
	CENTERLINE
	EXISTING C & G
	PROPOSED C & G
	RIGHT OF WAY
	1 FOOT EXISTING GROUND CONTOUR
	5 FOOT EXISTING GROUND CONTOUR
1880	2 FOOT GOLF COURSE CONTOUR
	INTERDRAIN
	PHASE LINE
	SHEET PILE CUT-OFF WALL
	SLOPE
14	LOT #
FF=00.00 P=00.00	FINISHED FLOOR ELEVATION / PAD ELEVATION
1	BLOCK NUMBER
	ELEVATION / DESCRIPTION
1.0%	PERCENTAGE AND DIRECTION OF SLOPE
00.00 / 00+00.00	LOTLINE T.C. ELEVATION / LOTLINE STATION
	DRIVEWAY
	RIP-RAP

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY

Call before you Dig

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UNDERGROUND SERVICE (USA)

AVOID OVERHEAD POWER LINE CONTACT. IT'S COSTLY

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NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

FIRE DEPARTMENT GENERAL NOTES:

FIRE HYDRANTS:

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH UNIFORM FIRE CODE APPENDIX III-B, FIRE HYDRANT LOCATIONS AND DISTRIBUTIONS, AS AMENDED.
2. FIRE HYDRANTS SHALL BE IN MAINTAINED IN AN OPERATIVE CONDITION AT ALL TIMES WITH THE REQUIRED WATER SUPPLY AND SHALL BE ACCEPTED BY PUBLIC WORKS DEPARTMENT.
3. FIRE HYDRANT SHALL HAVE PERMANENT MARKINGS IDENTIFYING: MANUFACTURER, SIZE OF THE MAIN VALVE OPENING, YEAR OF MANUFACTURE, MODEL NUMBER, DIRECTION OF OPENING AND BURY DEPTH. ALL HYDRANTS SHALL MEET THE REQUIREMENTS OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS.
4. ALL PUBLIC FIRE HYDRANTS SHALL HAVE A SIX DIGIT NUMBER (AS DESIGNATED BY PUBLIC WORKS) PAINTED ON THE BARREL BY THE HYDRANT INSTALLER. THE NUMBER SHALL BE IN 1" HIGH BLOCK NUMBERS USING BLACK ENAMEL PAINT. ALL NUMBERS SHALL MATCH APPROVED PLANS.
5. ALL FIRE DEPARTMENT CONNECTIONS (FDC) FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS SHALL BE LOCATED WITHIN 100 FEET OF A FIRE HYDRANT. THE 100 FEET SHALL BE MEASURED BY AN APPROVED UNOBSTRUCTED ROUTE. THE FDC SHALL BE LOCATED IN AN APPROVED LOCATION ON THE STREET OR FIRE LANE SIDE OF THE BUILDING BEING PROTECTED.
6. FIRE HYDRANTS SHALL BE IN CONFORMANCE WITH THE FIRE PREVENTION DIVISIONS UNIFORM GUIDELINES.

UNDERGROUND PIPING & VALVES:

7. PRIOR TO CLOSING ANY WATER SUPPLY CONTROL VALVE OR PLACING ANY FIRE HYDRANT OUT OF SERVICE, THE HENDERSON FIRE DEPARTMENT DISPATCH CENTER (565-1214) SHALL BE CONTACTED.
8. ALL SECTIONAL CONTROL VALVES CONTROLLING WATER SUPPLIES ON PRIVATE FIRE SERVICE MAINS SHALL BE LISTED POST INDICATING VALVES (PIV).
   EXCEPTION: APPROVED DEBRIS "LOCKOUT" CAPS MAY BE USED WHEN THE VALVE IS LOCATED WITHIN A ROADWAY.
9. A POST INDICATING VALVE (PIV) SHALL BE PROVIDED FOR ALL SPRINKLER SYSTEMS A MINIMUM OF 5 FEET FROM THE BUILDING FOOTING.
10. ALL VALVES THAT CONTROL THE WATER SUPPLY TO FIRE SPRINKLER SYSTEMS SHALL BE LISTED, INDICATING AND ELECTRICALLY SUPERVISED. THIS INCLUDES ALL VALVES STARTING FROM THE BACKFLOW ASSEMBLIES UNTIL THE WATER LINE ENTERS THE BUILDING.
11. ALL PIPING AND VALVES SUPPLYING FIRE SPRINKLER SYSTEMS SHALL BE PROTECTED FROM FREEZING WHEN EXPOSED TO TEMPERATURES LESS THAN 40' F. FREEZE PROTECTION SHALL BE APPROVED, DURABLE, AND PERMANENT.
12. ALL BACKFLOW OR CROSS CONNECTION REQUIREMENTS OF THE PUBLIC WORKS UTILITY DIVISION SHALL BE INSTALLED UPSTREAM OF THE FIRE SPRINKLER OR STANDPIPE SYSTEM "POST INDICATOR VALVE."
13. ALL REQUIRED TESTING AND FLUSHING OF THE UNDERGROUND FIRE SPRINKLER/STANDPIPE WATER SUPPLY PIPING SHALL BE PERFORMED IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION (AHJ). THE INSTALLING COMPANY SHALL FURNISH A "CONTRACTOR'S MATERIAL AND TESTING CERTIFICATE" (CM&T) COUNTERSIGNED BY THE PROPERTY OWNER OR REPRESENTATIVE. THE CM&T SHALL BE FILLED OUT COMPLETELY WITH THE AHJ'S INITIALS WITNESSING EACH TEST. WRITTEN APPROVAL SHALL BE OBTAINED FROM THE FIRE DEPARTMENT PREVENTION DIVISION BEFORE THE UNDERGROUND SUPPLY IS CONNECTED TO THE FIRE SPRINKLER OR STANDPIPE SYSTEM.

FIRE LANES:

14. FIRE APPARATUS ACCESS ROADS AND FIRE HYDRANTS INSTALLED FOR FIRE PROTECTION SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION.
15. ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK FIRE LANES, ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES.
16. FIRE LANES SHALL BE IN CONFORMANCE WITH THE FIRE PREVENTION DIVISION'S UNIFORM GUIDELINES.

GATES:

17. SHOP DRAWINGS FOR ALL GATES AND OPENERS SHALL BE SUBMITTED SEPARATELY FOR REVIEW AND APPROVAL. OBTAIN A COPY OF THE UNIFORM GUIDELINE FOR DETAILS.

APPROVAL

NEW DEVELOPMENT ENGINEER - KEN KOSHIRO, P.E.   DATE

CITY APPROVAL OF THE IMPROVEMENT PLANS IS GRANTED FOR ONE (1) YEAR ONLY. PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS, CITY OF HENDERSON, IF WORK IS NOT COMPLETED BY ____________ 20 ________.

ABBREVIATIONS

A.C.	ASPHALTIC CONCRETE	P.R.C.	POINT OF REVERSE CURVATURE
A.D.P.	ASSESSMENT DISTRICT PARCEL	P.R.V.C.	POINT OF REVERSE VERTICAL CURVE
B.C.	BACK OF CURB	P.T.	POINT OF TANGENCY
B.C.R.	BEGINNING OF CURB RETURN	P.U.E.	PUBLIC UTILITY EASEMENT
B.F.E.	BASE FLOOD ELEVATION	P.V.I.	POINT OF VERTICAL INTERSECTION
BSW	BACK OF SIDEWALK	R.C.B./RCP	REINFORCED CONCRETE BOX
B.V.C.	BEGIN VERTICAL CURVE	R.P.	RADIUS POINT
C1	CURVE LABEL (SEE CURVE TABLE)	RT	RIGHT
D.I.	DROP INLET	R/W	RIGHT-OF-WAY LINE
E.G.L.	ENERGY GRADE LINE	SAN. M.H.	SANITARY MANHOLE
E.V.C.	END VERTICAL CURVE	SD	STORM DRAIN
EX.	EXISTING	SD M.H.	STORM DRAIN MANHOLE
F.G.	FINISHED GRADE	SFM	SEWER FORCE MAIN
FL	FLOW LINE	S.S./SS	SANITARY SEWER
FPR	FUTURE PROPOSED	T.C.	TOP OF CURB
G.B.	GRADE BREAK	T.O.F.	TOP OF FOOTING
H.G.L.	HYDRAULIC GRADE LINE	TW	TOP OF WALL
H.O.A.	HOMEOWNERS ASSOCIATION	TOE	TOE OF CHANNEL
H.P.	HIGH POINT	TOP	TOP OF CHANNEL
LF	LINEAR FEET	T.R.W.	TOP OF RETAINING WALL
LT	LEFT	TYP.	TYPICAL
P.C.	POINT OF CURVATURE	W.L./WL	WATER LINE
P.C.C.	POINT OF CONVERSE CURVATURE	FF	FINISHED FLOOR ELEVATIONS
PDE	PUBLIC DRAINAGE EASEMENT	W.S.E.	WATER SURFACE ELEVATION

ESTIMATE OF QUANTITIES

ITEM (PUBLIC)

1.	EXCAVATION (FILL)	50000 CY
2.	RIP-RAP d50=12", THICKNESS=2'	22964 CY
3.	RIP-RAP d50=18", THICKNESS=3'	34445 CY
4.	CONCRETE MAINTENANCE ACCESS ROAD	1550 LF
5.	SHEET PILE WALL	1 LS

THESE QUANTITIES ARE AN ESTIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR QUANTITIES FOR BIDDING PURPOSES.

CITY OF HENDERSON SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST ADDITION 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. IN ALL CASES, THESE STANDARDS SHALL SUPERSEDE THE UNIFORM STANDARD SPECIFICATIONS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATION BOOKS.
2. THESE STANDARDS SHALL APPLY TO ALL CONSTRUCTION.
3. SEWER MAINS ONLY TO BE LAID IN SEWER TRENCHES.
4. ALL LATERALS TO BE LAID AT NOT LESS THAN MINIMUM SLOPES AS SHOWN IN THESE STANDARDS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CONTROLLING AGENCY.
6. SOIL TESTING SHALL BE IN ACCORDANCE WITH SECTION 3.11 OF THESE STANDARDS.
7. ALL EXFILTRATION, INFILTRATION, AIR TESTING AND TELEVISING OF LINES SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
8. CUT SHEETS MUST BE SUBMITTED TO THE AGENCY BEFORE CONSTRUCTION WILL BE PERMITTED TO START.
9. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.
10. ALL HOUSE LATERALS TO BE LAID TO MINIMUM 2 PERCENT SLOPE AND SHALL CONFORM TO STANDARDS FOR CONSTRUCTION OF OFFSITE IMPROVEMENTS IN THE CLARK COUNTY AREA.

REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: C. LUQUETTE
DRAWN BY: D. JOHNSON
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-302
SCALE: HORIZ.: NONE VERT.: NONE

PBSJ
901 North Green Valley Pkwy. Suite 100 Henderson, Nevada 89014 Telephone: 702/263-7275 Fax: 702/263-7200
ENGINEERING · PLANNING · SURVEYING · CONSTRUCTION SERVICES

SEAL: PROFESSIONAL ENGINEER STATE OF NEVADA · LEE C. FARRIS · CIVIL · No. 13681

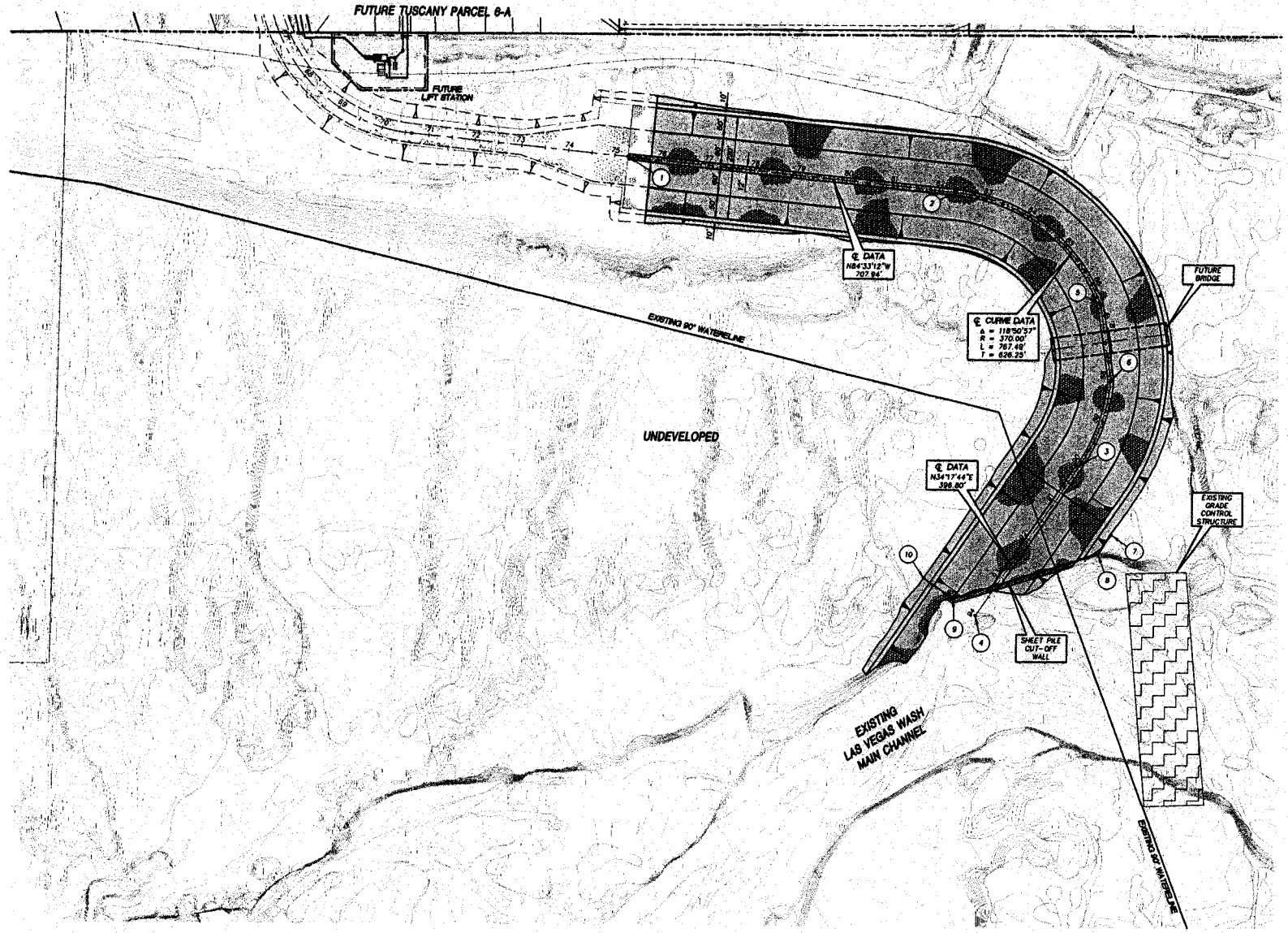
THE CITY OF HENDERSON

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION
- PHASE 3 IMPROVEMENTS -
GENERAL NOTES, LEGEND, ABBREVATIONS, AND ESTIMATE OF QUANTITIES

XXXX

DRAWING NO. C2 — 2 / 8



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GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

COORDINATE TABLE

	NORTHING	EASTING	C-1 STATION
1	10733.9856	6232.6373	75+27.77
2	10801.1820	5527.8932	82+35.71
3	11377.9930	5257.3408	90+03.20
4	11705.8035	5480.9216	94+00.00
5	11037.1384	5217.5027	86+46.38
6	11199.3903	5194.2214	88+11.64
7	11529.2223	5191.0231	
8	11570.5294	5219.1963	
9	11668.7801	5528.2970	
10	11625.2083	5592.1812	

REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-303
SCALE: HORIZ.: 1"=100'
VERT.: NONE

PBSJ
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PROFESSIONAL ENGINEER STATE OF NEVADA
LEE C. FARRIS
CIVIL
No. 13691

THE CITY OF HENDERSON

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION - PHASE 3 IMPROVEMENTS -

C-1 CHANNEL SURVEY CONTROL PLAN

XXXX

DRAWING NO. C3

3 / 8

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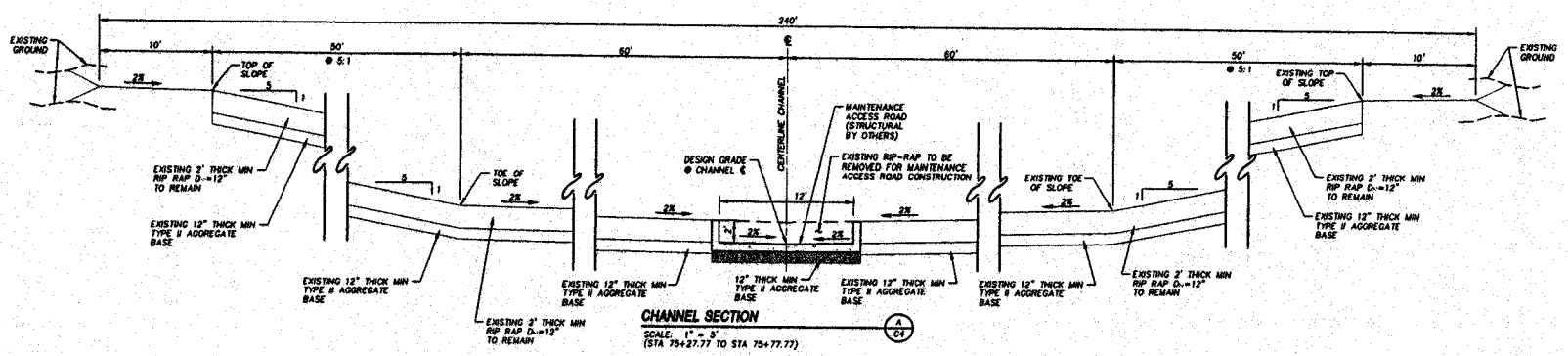
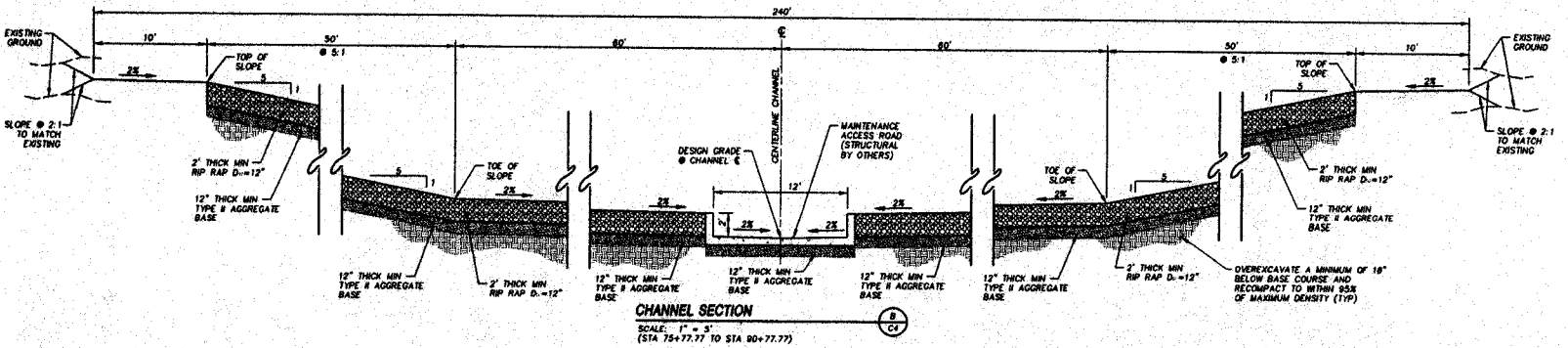


CHANNEL SECTION (A / C4)

SCALE: 1" = 5'

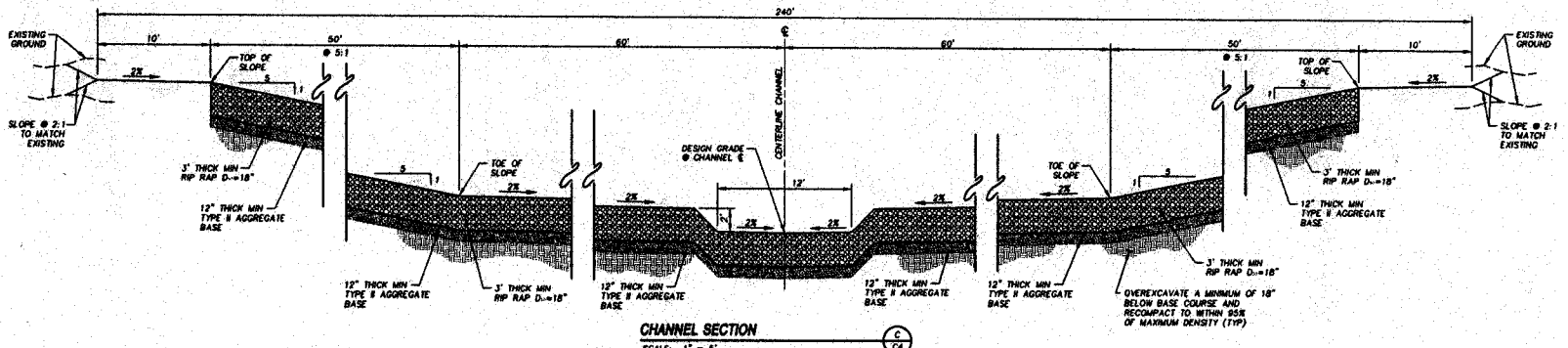
(STA 75+27.77 TO STA 75+77.77)



CHANNEL SECTION (B / C4)

SCALE: 1" = 5'

(STA 75+77.77 TO STA 90+77.77)



CHANNEL SECTION (C / C4)

SCALE: 1" = 5'

(STA 90+77.77 TO STA 93+33.68)

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-304
SCALE: HORIZ.: 1" = 5' VERT.: 1" = 5'

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Henderson, Nevada 89014
Telephone: 702/363-7275
Fax: 702/363-7310
ENGINEERING · PLANNING · SURVEYING · CONSTRUCTION SERVICES

SEAL

LEE C. FARRIS CIVIL No. 13961

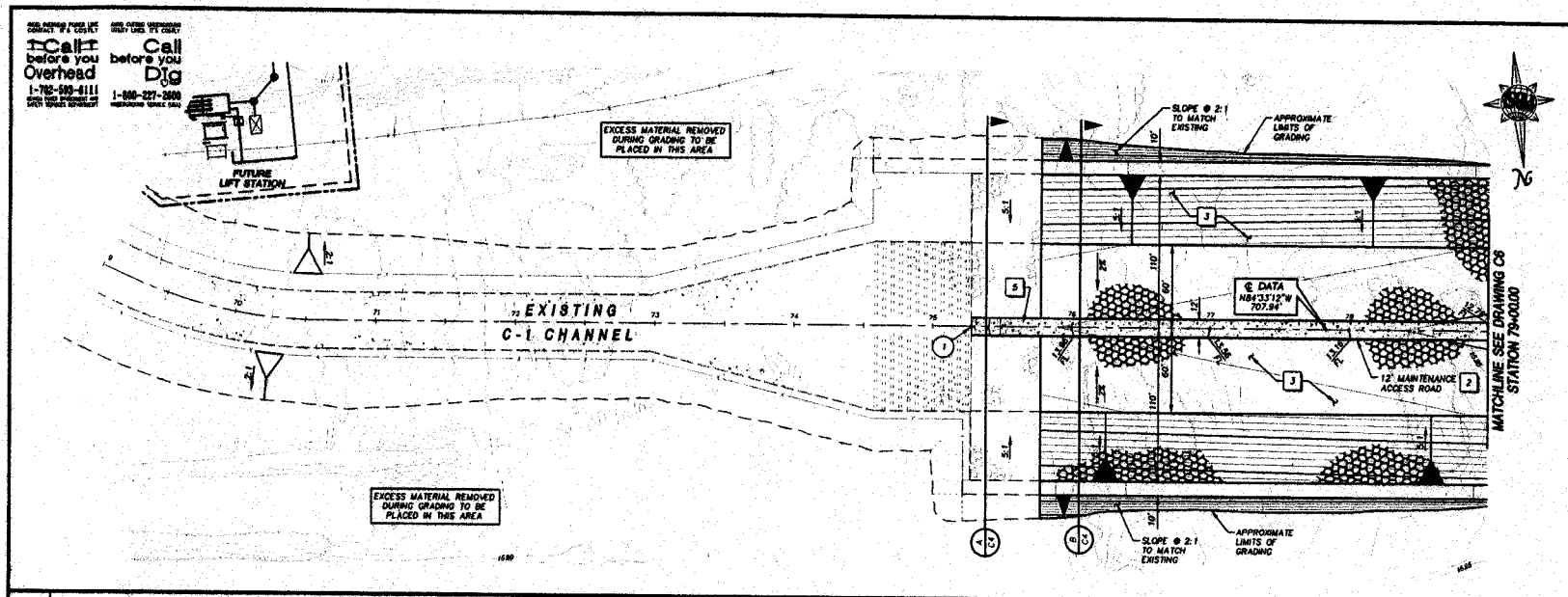
City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION - PHASE 3 IMPROVEMENTS -

TYPICAL CHANNEL SECTIONS

XXXX

DRAWING NO. C4



KEY NOTES

1. CONSTRUCT TRAPEZOIDAL CHANNEL PER TYPICAL SECTIONS DRAWING C4
2. 12' MAINTENANCE ACCESS ROAD PER SECTION B DRAWING C4 (STRUCTURAL BY OTHERS)
3. 2' THICK (MIN) LIGHT RIP-RAP D_{50} =12" W/ 12" TYPE II AGGREGATE BASE
4. 3' THICK (MIN) HEAVY RIP-RAP D_{50} =18" W/ 12" TYPE II AGGREGATE BASE
5. REMOVE EXISTING GROUTED RIP-RAP FOR 12' MAINTENANCE ACCESS ROAD
6. SHEET PILE CUT-OFF WALL REFER TO DETAIL 1 DRAWING C8

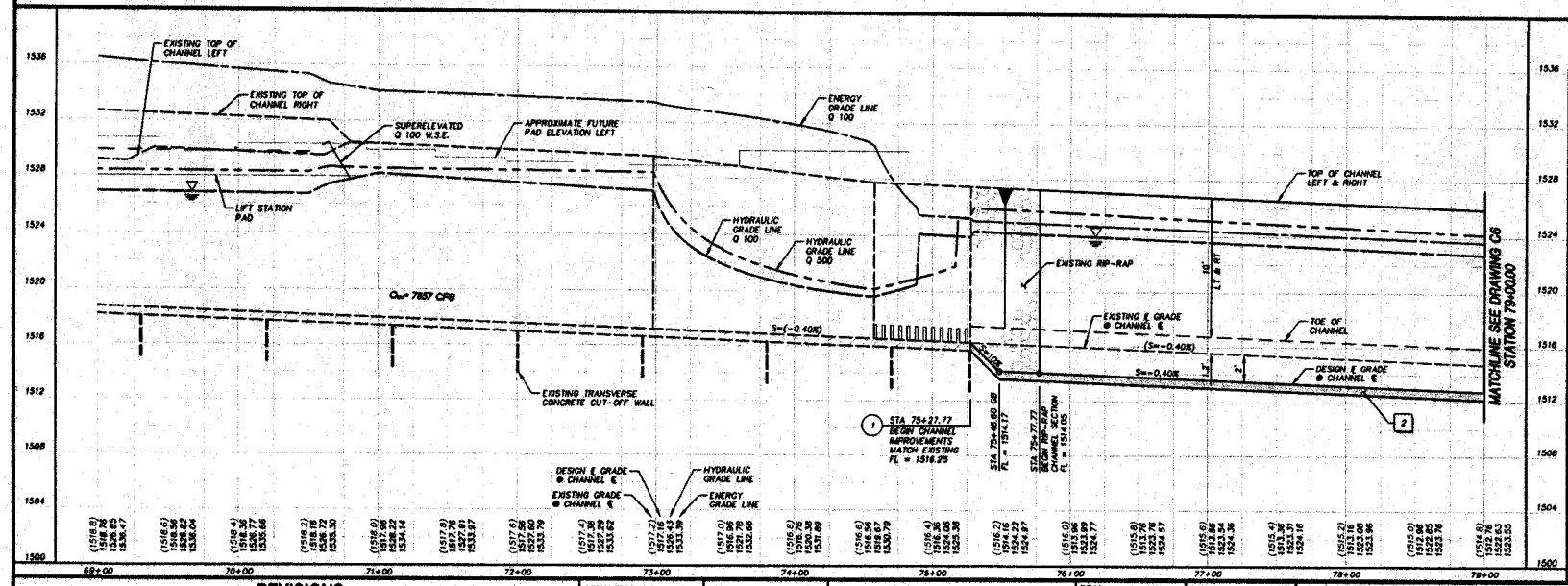
GENERAL NOTES

1. ADD 1500 TO PLAN ELEVATIONS
2. ALL STATIONING IS CENTERLINE OF CHANNEL UNLESS OTHERWISE NOTED.

APPROVAL

NEW DEVELOPMENT ENGINEER – KEN KOSHIRO, P.E. DATE

CITY APPROVAL OF THE IMPROVEMENT PLANS IS GRANTED FOR ONE (1) YEAR ONLY. PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS, CITY OF HENDERSON, IF WORK IS NOT COMPLETED BY _____ 20 ___



GRAPHIC SCALE

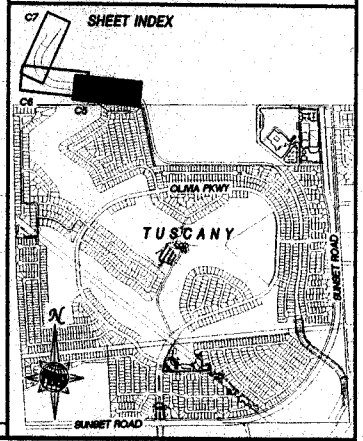
(IN FEET)

HORIZ: 1 inch = 40 ft.
VERT: 1 inch = 4 ft.

BENCHMARK

CITY OF HENDERSON BENCH MARK NO. 220 DATED 11/02/93 – BRASS CAP IN THE TOP OF THE CURB ON THE SOUTHEAST CORNER OF OLSEN STREET AND REDROCK STREET. ELEVATION IN METERS: 508.195 = 1667.303 FEET – C.O.H. NAVD '88
CONVERSION FACTOR: METERS X 3937/1200 = U.S. FEET
PER C.O.H. BOOK OF BENCHMARKS DATED APRIL 1997.

SHEET INDEX



REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-305
SCALE: HORIZ.: 1"=40' VERT.: 1"=4'

PBSJ
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Telephone: 702/263-7279
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ENGINEERING · PLANNING · SURVEYING · CONSTRUCTION SERVICES

SEAL
PROFESSIONAL ENGINEER STATE OF NEVADA LEE C. FARRIS CIVIL No. 13691

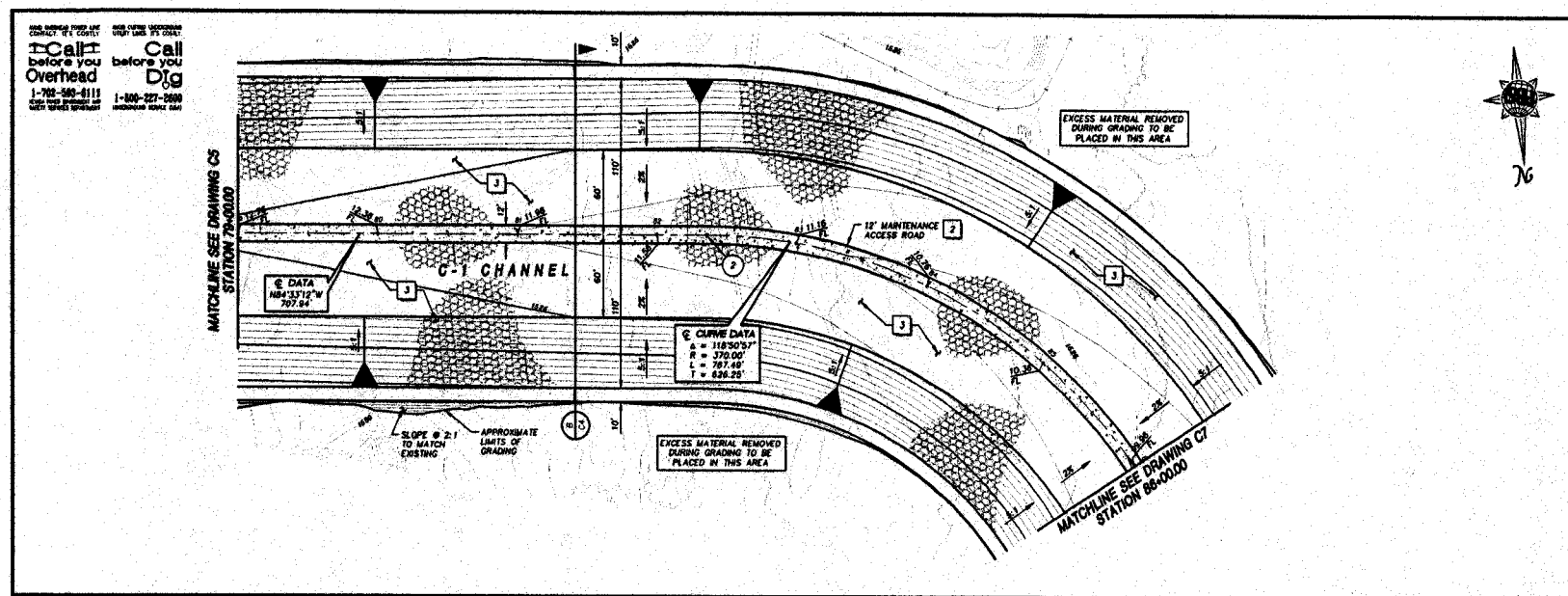
THE CITY OF HENDERSON

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION
- PHASE 3 IMPROVEMENTS -
C-1 CHANNEL
PLAN AND PROFILE STA 75+27.77 TO STA 79+00.00

XXXX

DRAWING NO. C5 5/8



KEY NOTES

1. CONSTRUCT TRAPEZOIDAL CHANNEL PER TYPICAL SECTIONS DRAWING C4
2. 12' MAINTENANCE ACCESS ROAD PER SECTION B DRAWING C4 (STRUCTURAL BY OTHERS)
3. 2' THICK (MIN) LIGHT RIP-RAP D_{50} =12" W/ 12" TYPE II AGGREGATE BASE
4. 3' THICK (MIN) HEAVY RIP-RAP D_{50} =18" W/ 12" TYPE II AGGREGATE BASE
5. REMOVE EXISTING GROUTED RIP-RAP FOR 12' MAINTENANCE ACCESS ROAD
6. SHEET PILE CUT-OFF WALL REFER TO DETAIL 1 DRAWING C8

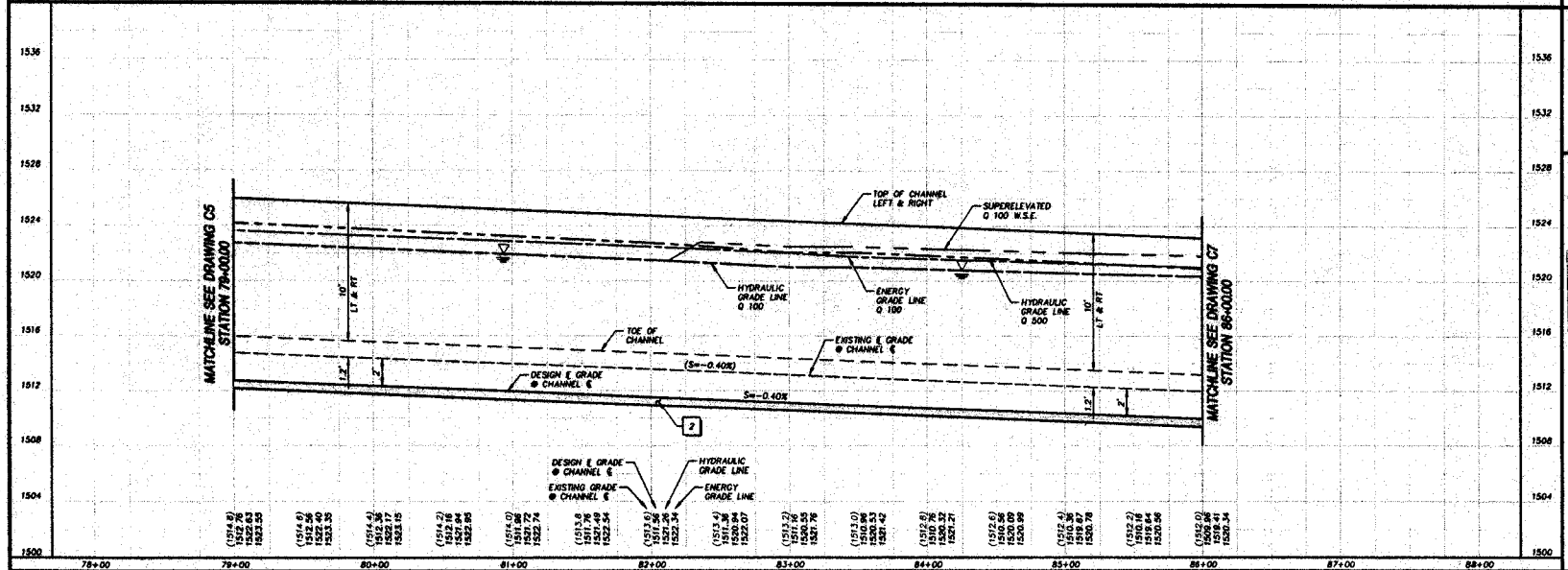
GENERAL NOTES

1. ADD 1500 TO PLAN ELEVATIONS
2. ALL STATIONING IS CENTERLINE OF CHANNEL UNLESS OTHERWISE NOTED.

APPROVAL

NEW DEVELOPMENT ENGINEER – KEN KOSHIRO, P.E. DATE

CITY APPROVAL OF THE IMPROVEMENT PLANS IS GRANTED FOR ONE (1) YEAR ONLY. PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS, CITY OF HENDERSON, IF WORK IS NOT COMPLETED BY _____ 20 __



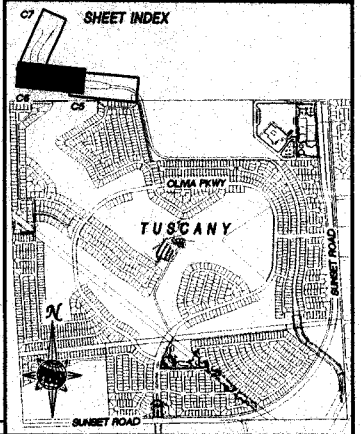
GRAPHIC SCALE

(IN FEET)
HORZ: 1 inch = 40 ft.
VERT: 1 inch = 4 ft.

BENCHMARK

CITY OF HENDERSON BENCH MARK NO. 220 DATED 11/02/93 – BRASS CAP IN THE TOP OF THE CURB ON THE SOUTHEAST CORNER OF GLSEN STREET AND REDROCK STREET. ELEVATION IN METERS: 508.195 = 1667.303 FEET – C.O.H. NAVD '88
CONVERSION FACTOR: METERS X 3937/1200 = U.S. FEET
PER C.O.H. BOOK OF BENCHMARKS DATED APRIL 1997.

SHEET INDEX



REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-306
SCALE: HORIZ.: 1"=40' VERT.: 1"=4'

PBSJ
901 North Green Valley Pkwy. Suite 100 Henderson, Nevada 89014 Telephone: 702/263-7278 Fax: 702/263-7300
ENGINEERING · PLANNING · SURVEYING · CONSTRUCTION SERVICES

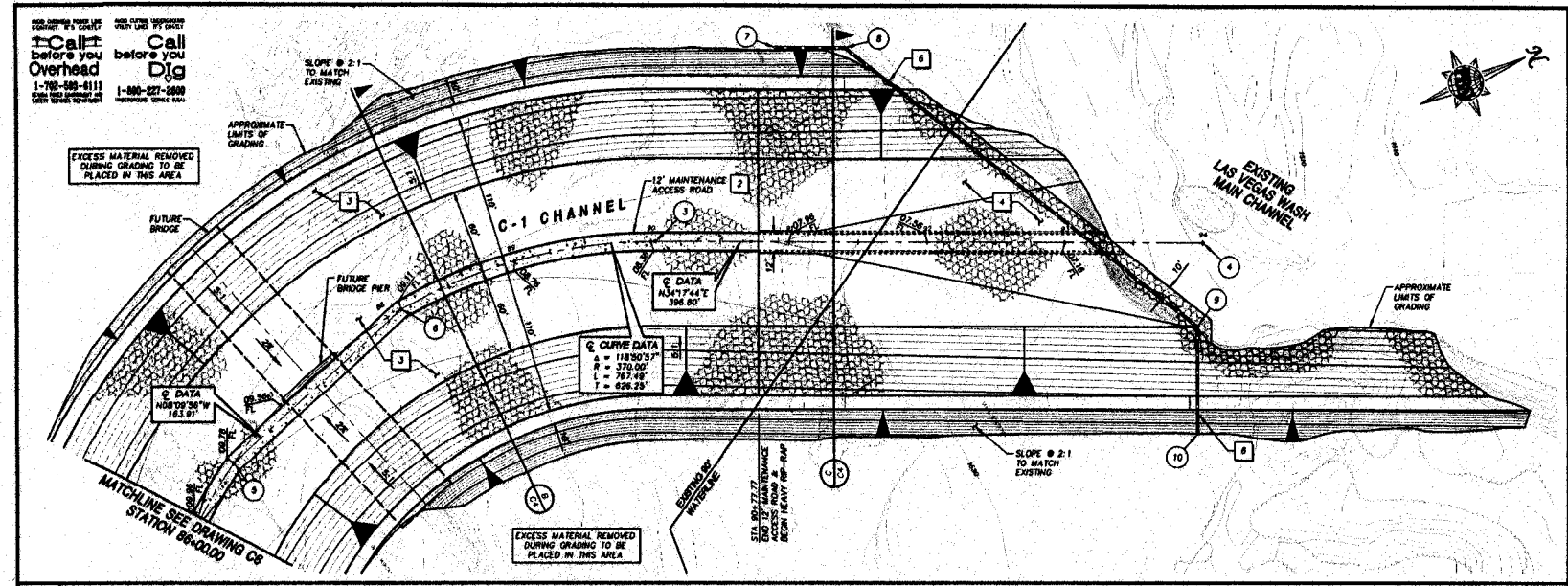
SEAL
PROFESSIONAL ENGINEER STATE OF NEVADA LEE C. FARRIS CIVIL No. 13881

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION
- PHASE 3 IMPROVEMENTS -
C-1 CHANNEL
PLAN AND PROFILE STA 79+00.00 TO STA 86+00.00

XXXX

DRAWING NO. C6 6/8



KEY NOTES

1. CONSTRUCT TRAPEZOIDAL CHANNEL PER TYPICAL SECTIONS DRAWING C4
2. 12' MAINTENANCE ACCESS ROAD PER SECTION B DRAWING C4 (STRUCTURAL BY OTHERS)
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6. SHEET PILE CUT-OFF WALL REFER TO DETAIL 1 DRAWING C8

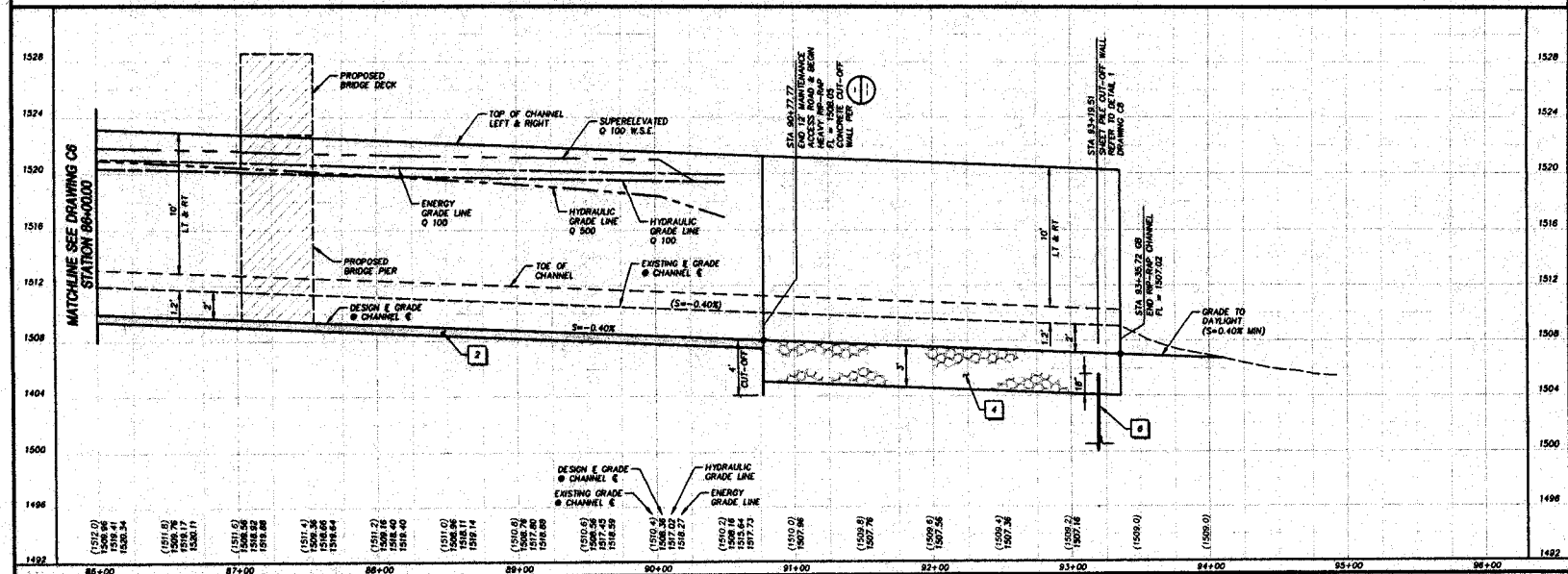
GENERAL NOTES

1. ADD 1500 TO PLAN ELEVATIONS
2. ALL STATIONING IS CENTERLINE OF CHANNEL UNLESS OTHERWISE NOTED.

APPROVAL

NEW DEVELOPMENT ENGINEER – KEN KOSHIRO, P.E. DATE

CITY APPROVAL OF THE IMPROVEMENT PLANS IS GRANTED FOR ONE (1) YEAR ONLY. PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS, CITY OF HENDERSON, IF WORK IS NOT COMPLETED BY _____ 20__



GRAPHIC SCALE

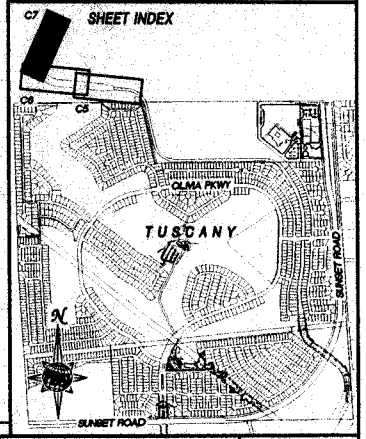
(IN FEET)

HORIZ: 1 inch = 40 ft.
VERT: 1 inch = 4 ft.

BENCHMARK

CITY OF HENDERSON BENCH MARK NO. 220 DATED 11/02/93 – BRASS CAP IN THE TOP OF THE CURB ON THE SOUTHEAST CORNER OF OLSEN STREET AND REDROCK STREET. ELEVATION IN METERS: 508.185 = 1667.303 FEET – C.O.H. NAVD '88 CONVERSION FACTOR: METERS X 3937/1200 = U.S. FEET PER C.O.H. BOOK OF BENCHMARKS DATED APRIL 1997

SHEET INDEX



REVISIONS

REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-307
SCALE: HORIZ.: 1"=40' VERT.: 1"=4'

PBSJ
ENGINEERING · PLANNING · SURVEYING · CONSTRUCTION SERVICES
101 North Green Valley Pkwy. Suite 200 Henderson, Nevada 89014 Telephone: 702/263-7272 Fax: 702/263-7200

SEAL

LEE C. FARRIS CIVIL No. 13601

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION - PHASE 3 IMPROVEMENTS -

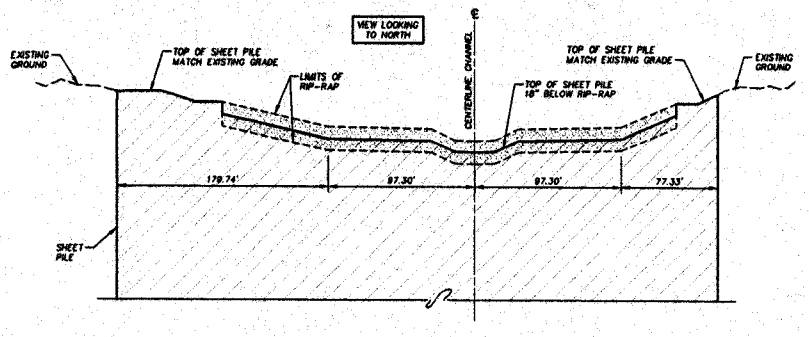
C-1 CHANNEL PLAN AND PROFILE STA 86+00.00 TO STA 94+00.00

XXXX

DRAWING NO. C7 7/8

Call before you Overhead 1-702-593-8111

Call before you Dig 1-800-227-2600



NOTES:

1. BOTTOM ELEVATION OF SHEET PILE WILL BE CONSISTENT ACROSS EACH SECTION
2. SHEET PILE MUST BE DESIGNED TO RETAIN A MINIMUM OF 15' FEET OF FILL
3. SHEET PILE DESIGN TO BE PROVIDED BY CONTRACTOR

SHEET PILE WALL DETAIL (1/C8)

NOT TO SCALE

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APPROVAL

DESIGNED BY: A. SPATA
DRAWN BY: W. WITMER
CHECKED BY: L. FARRIS
DATE: MARCH 14, 2002

JOB NO.: 511197
DRAWING NO.: 1197C1-308
SCALE: HORIZ.: NONE VERT.: NONE

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SEAL

LEE C. FARRIS CIVIL No. 13681

City of Henderson, Nevada

TUSCANY - C-1 CHANNEL EXTENSION - PHASE 3 IMPROVEMENTS - MISCELLANEOUS DETAILS

XXXX

DRAWING NO. C8 8/8