

GENERAL NOTES

BOUNDARY AND TOPOGRAPHIC SURVEY BY OTHERS.

- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- NO GRADE SHALL EXCEED 3:1 SLOPE.
- ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
- ALL UTILITIES SERVING SITE ARE UNDERGROUND.
- ALL OUTSIDE TRASH CONTAINERS, HVAC UNITS, ELECTRIC, TELEPHONE AND GAS METERS, SATELLITE DISHES, AND ROOFTOP MECHANICAL APPARATUS SHALL BE THOROUGHLY SCREENED WITH MATERIALS AND/OR LANDSCAPING TO CONCEAL THE VISIBILITY OF SUCH ITEMS FROM THE VIEW OF RIGHTS-OF-WAY AND/OR ADJACENT PROPERTIES AS REVIEWED AND APPROVED BY THE PLANNING DIVISION.

DETENTION FOR THE LOT HAS BEEN ACCOUNTED FOR IN THE DESIGN OF THE OVERALL DEVELOPMENT BY OTHERS.

- HANDICAP STALL LOCATIONS ARE TO BE DETERMINED AND COORDINATED WITH THE CITY OF O'FALLON.

PARKING CALCULATIONS:
BUILDING 1 - 3,680 S.F. (1250 S.F. FLOOR AREA)

PARKING @ 1/50 S.F. OF FLOOR AREA = 25 SPACES

PARKING PROVIDED = 58 SPACES (INCLUDING H.C. SPACES)
H.C. SPACES = 2 PROVIDED

- COVERAGE CALCULATIONS:
BUILDINGS - 3,680 S.F. (6.0%)
PAVEMENT - 39,089 S.F. (66%)
TOTAL LANDSCAPE AREA = 16,880 S.F. (28%)

SITE ACREAGE = 59,649 S.F.

SANITARY SEWER NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR SANITARY SEWERS TO MEET REQUIREMENTS OF THE CITY OF O'FALLON, BILL NO. 1830, ORDINANCE NO. 1810 SECTION 4: SPECIFICATIONS FOR INSTALLATION OF SEWER MAINS, SERVICE AND TESTING.
- ALL MANHOLES SHALL BE 48" DIA. PRE-CAST CONCRETE PER ASTM C-478.
- ALL LATERAL SEWER CONSTRUCTION METHODS TO CONFORM TO LATEST STANDARDS AND SPECIFICATIONS OF THE CITY OF O'FALLON PLUMBING CODE.
- ALL TRENCHES UNDER AREAS TO BE PAVED SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF O'FALLON SPECIFICATIONS.
- CONTRACTOR TO START LAYING PIPE AT DOWNSTREAM MANHOLE AND WORK UPSTREAM.
- TAILSTAKE ELEVATIONS AND WYE LOCATIONS ARE SHOWN ON THE SANITARY SEWER PROFILES.
- CLEANOUTS SHALL BE LOCATED AT ALL HORIZONTAL AND VERTICAL CHANGES IN DIRECTION OF FLOW OF BUILDING LATERALS AND ANY SANITARY LATERAL OF 100 FEET OR LONGER.
- VERTICAL CLEARANCE BETWEEN SEWER AND WATER MAINS SHALL BE A MINIMUM OF 2' - 0".
- ALL TRENCH BACKFILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY AND RAILROAD SHALL BE GRANULAR BACKFILLED. TRENCH BACKFILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL ALSO IN LIEU OF THE COMPACTED EARTH BACKFILL.
- JETTING IS NOT AN ACCEPTABLE METHOD OF ACHIEVING BACKFILL COMPACTION. ALL BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO AT LEAST 95 PERCENT OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99.

WATER LINE NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR WATER MAINS TO MEET REQUIREMENTS OF THE CITY OF O'FALLON, SECTION 3: SPECIFICATIONS FOR INSTALLATION OF WATER MAINS, SERVICE AND TESTING.
- WATER MAINS SHALL BE POLY VINYL CHLORIDE (PVC) PIPE SDR 21 AND RATED FOR 200 p.s.i. WORKING PRESSURE. DUCTILE IRON PIPE SHALL CONFORM TO AMERICAN STANDARD ASSOCIATION STANDARD A21.51 AND HAVE CLASS 51 WALL THICKNESS AND BE CEMENT LINED AND SEAL COATED ON THE INTERIOR IN ACCORDANCE WITH A.S.A. STANDARD A21.4. THE EXTERIOR OF DUCTILE IRON PIPE SHALL BE COATED IN ACCORDANCE WITH A.S.A. STANDARD A21.51.
- ALL WATER MAIN FITTINGS SHALL BE DUCTILE IRON CONFORMING TO A.S.A. STANDARD A21.10 WITH A PRESSURE RATING OF 350 PSI. THE FITTINGS SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH A.S.A. STANDARD A21.4 AND THE EXTERIOR SHALL BE COATED IN ACCORDANCE WITH A.S.A. STANDARD A21.10.
- ALL PVC PIPE SHALL HAVE A #6 BARE TRACER WIRE LAID WITHIN 3 INCHES ABOVE THE PIPE TO ENABLE THE CITY TO LOCATE THE PIPE.
- VALVES SHALL BE A.W.W.A. STANDARD LEFT-HAND THREAD, 200 LB. WORKING PRESSURE BRONZE MOUNTED PARALLEL TYPE, DOUBLE DISC, OR COMPRESSION RESILIENT SEAT, "O" RING STEM SEALS, NON-RISING STEM WITH TWO INCH SQUARE NUT.
- VALVE BOXES SHALL BE CAST IRON ADJUSTABLE SCREW TYPE-5 1/4 INCH SHAFT WITH BASE, WATER COVER AND SKIRT.
- FIRE HYDRANTS SHALL BE A.W.W.A. STANDARD COMPRESSION DRYTAP, TWO PIECE STAND PIPE, 5 1/4" VALVE OPENING, WITH 6" INLET CONNECTION, 2 1/2" NOZZLES AND ONE 4 1/2" STEAMER NOZZLE; MECHANICAL JOINT INLET WITH CAST IRON RETAINER GLANDS WITH SET SCREWS. FIRE HYDRANTS SHALL CONFORM TO A.W.W.A. STANDARD C502 AND SHALL BE MUELLER CENTURION A-423 BREAKAWAY OR AMERICAN DARLING B-62-B BREAKAWAY HYDRANTS.
- THRUST SUPPORTS SHALL BE CONSTRUCTED BEHIND ALL BENDS, TEES, CAPS, PLUGS, AND FIRE HYDRANTS. THEY SHALL BEAR AGAINST UNDISTURBED EARTH.
- BEFORE WATER MAINS SHALL BE ACCEPTED AND PUT INTO SERVICE THEY SHALL BE STERILIZED, FLUSHED, AND TESTED ACCORDING TO STANDARD PRACTICES BY THE DEVELOPER, AND TO THE SATISFACTION OF THE CITY. TEST MUST MEET STATE OF MISSOURI STANDARDS, AND SHALL BE EVIDENCED BY TEST RESULTS FURNISHED TO THE CITY.
- VERTICAL CLEARANCE BETWEEN SEWERS AND WATER MAINS SHALL BE A MINIMUM OF 2' - 0".
- ALL WATER LINES AND SERVICE LINES SHALL HAVE A MINIMUM OF 42" OF COVERAGE.
- ALL WATER LINE CROSSING UNDER RAILROAD SHALL BE GRANULAR BACKFILLED.
- TOUCH READ PAD REQUIRED AT BUILDING AS SPECIFIED BY ALLIANCE WATER COMPANY.
- METER INSIDE BUILDING MUST BE ACCESSIBLE TO WATER COMPANY DURING NORMAL BUSINESS HOURS.

STORM SEWER NOTES

- ALL CONCRETE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C76 CLASS III UNLESS NOTED.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF O'FALLON STANDARD CONSTRUCTION SPECIFICATIONS.
- TYPE "C" BEDDING IS REQUIRED FOR PIPES IN ROCK.
- ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE. ONLY BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF O'FALLON STANDARD CONSTRUCTION SPECIFICATIONS.
- ALL TRENCH BACKFILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY AND RAILROAD SHALL BE GRANULAR BACKFILLED. TRENCH BACKFILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL ALSO IN LIEU OF THE COMPACTED EARTH BACKFILL.
- JETTING IS NOT AN ACCEPTABLE METHOD OF ACHIEVING BACKFILL COMPACTION. ALL BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO AT LEAST 95 PERCENT OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99.

EARTHWORK NOTES:

BULK CUT..... 640 ± CUBIC YARD

BULK FILL..... 1240 ± CUBIC YARD (INCLUDES 15% FOR COMPACTION)

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL.

THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY STOCK AND ASSOCIATES CONSULTING ENGINEERS.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS LESS THAN TWENTY-FOUR INCHES IN DIAMETER, STANDARD MANHOLES; PROCESS OR TRANSFER PIPING; ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS AND FOUNDATIONS, ETC.

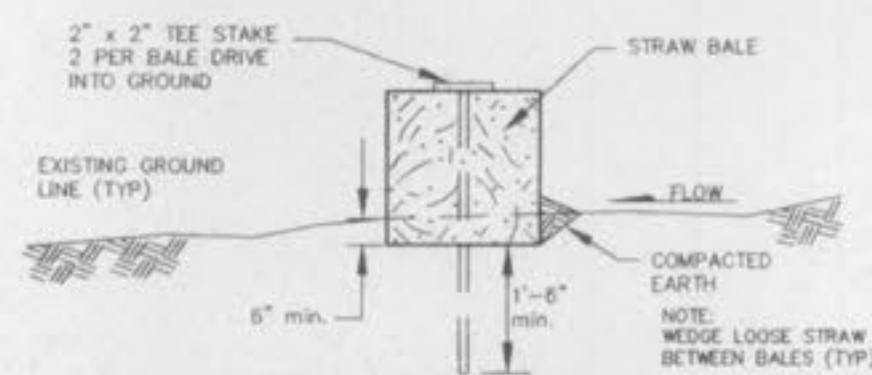
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO REMOVAL OF UNSUITABLE MATERIAL WHICH MUST BE REMOVED FROM SITE.

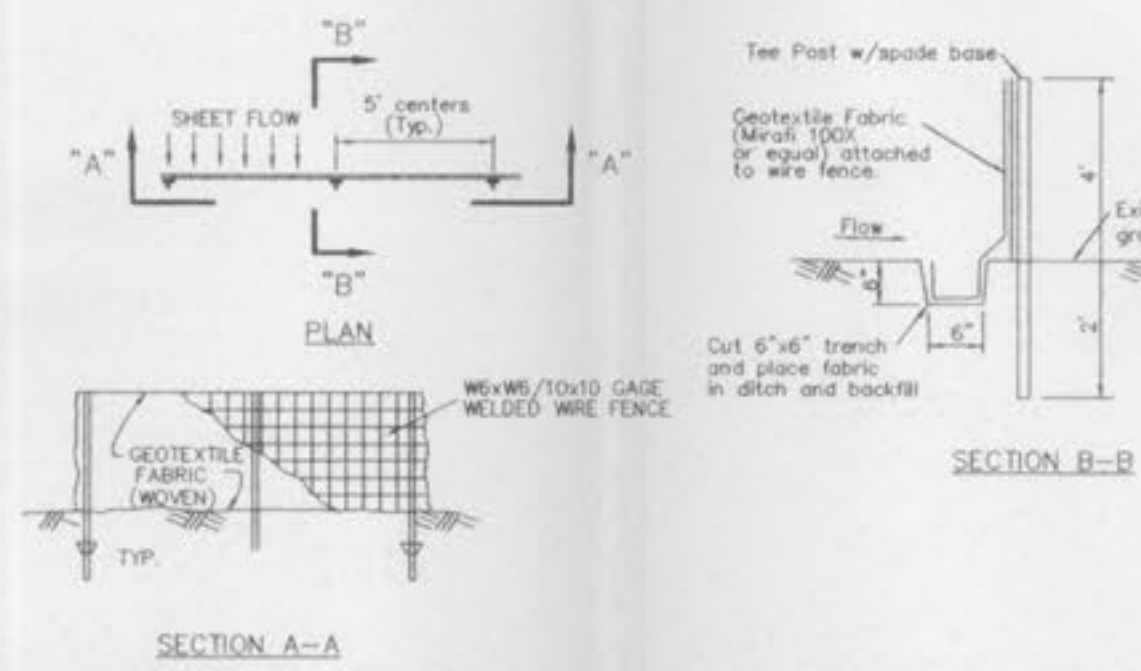
THE ABOVE QUANTITIES ARE AN ESTIMATE AND SHOULD BE CONSIDERED AS SUCH. IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO PREPARE A QUANTITY TAKEOFF AND NOTE ANY DISCREPANCIES TO THE ENGINEER.

GENERAL NOTES:

- Do not scale drawing. Follow dimensions.
- Additional straw bales may be required as directed by the Department.
- Siltation Control Devices to remain in place until adequate vegetation growth occurs to further stabilize the soil.
- Siltation Fences shall be inspected periodically for damage and for the amount of sedimentation which has accumulated. Removal of sediment will be required when it reaches 1/2 of its height of the siltation fence.
- Straw Bales shall be inspected periodically for deterioration. Bales which have rotted or failed shall be replaced as directed by the Department.
- Attachment of Metal Wire Fence and Geotextile Fabric to be in accordance with the manufacturer's recommendation.



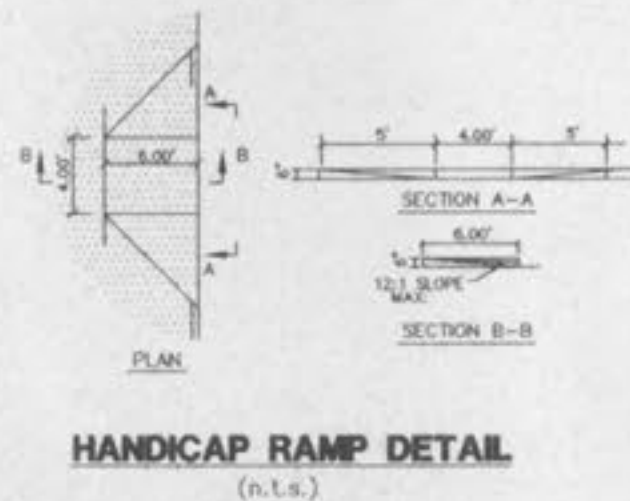
**SILTATION CONTROL
HAY BALE DETAIL**
(n.t.s.)



**SILTATION CONTROL
SILT FENCE DETAIL**
(n.t.s.)



HANDICAPPED PARKING SIGN
(n.t.s.)



HANDICAP RAMP DETAIL
(n.t.s.)



TYPICAL PARKING STALLS
(n.t.s.)



HANDICAPPED SIGN
(n.t.s.)

SILTATION CONTROL NOTES

SILTATION CONTROL GENERAL NOTES

- Installation of all perimeter sediment control shall be implemented as the first step of grading and within seven (7) days of grubbing the site.
- Inspection of siltation control devices shall take place once every seven days and within 24 hours of any 0.5"/24 hour rain event. Any siltation control in need of repair shall occur immediately.
- All slopes or drainage channels, once constructed to final grade, shall be seeded and mulched per specifications within seven (7) days.
- Silt fences shall be installed immediately around each storm sewer structure once final construction of each individual structure is complete.
- All siltation control devices shall remain in place until upslope areas have been permanently stabilized.

SILTATION CONTROL SCHEDULE IMPLEMENTATION

- Perimeter siltation control and construction entrances to be installed.
- Begin placing aggregate base in parking areas once area has reached final grade to prevent erosion.
- Place silt fence around each storm sewer structure as it is completed.
- Immediately seed areas upon reaching final grade that are to be permanently seeded.

TEMPORARY ACCESS ROADS AND PARKING AREAS SPECIFICATIONS

- Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
- Grades should be sufficient to provide drainage, but should not exceed 4 percent.
- Roadbeds shall be at least 24 feet wide.
- All cuts and fills shall be 3:1 or flatter to the extent possible.
- Drainage ditches shall be provided as needed.
- The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
- An 8-inch course of 2" MINUS aggregate shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric (Mirofi 500X) may be applied to the roadbed for additional stability in accordance with fabric manufacturer's specifications.

VEGETATION

OFFSITE AREAS:

All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

ONSITE:

Refer to drawings for areas which shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

MAINTENANCE

Seeded areas adjacent to the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.

HAY BALE SILTATION CONTROL SPECIFICATIONS

SHEET FLOW APPLICATIONS:

- Bales shall be placed in a single row, lengthwise on the contour, with both ends of adjacent bales tightly abutting one another.
- All bales shall be either wire-bound or string-tied. Straw bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of the bindings).
- The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill and shall be built up to 4 inches against the uphill side of the barrier (See detail this sheet).
- Each bale shall be securely anchored by at least two stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or rebars shall be driven deep enough into the ground to securely anchor the bales.
- The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales. (Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency).
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Straw bale barriers shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

CHANNEL FLOW APPLICATIONS:

- Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
- The remaining steps for installing a straw bale barrier for sheet flow applications apply here, with the following addition.
- The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

MAINTENANCE

- Hay bale barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged fence, end runs and undercutting beneath fence.
- Necessary repairs to barriers or replacement of silt fence shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

SILT FENCE SPECIFICATIONS

- Silt Fence to be woven geotextile fabric Mirofi 100X or equal.
- Fabric to be supported by metal tee post with spade base spaced on 5' centers with W6 x W6/10 x 10 gage welded wire fence.
- Fabric shall be entrenched and backfilled. A trench shall be excavated a minimum of 6 inches deep for the length of the fence. The excavated soil shall be backfilled against the fence. See detail this sheet.
- Fence height shall be a minimum of 4 feet in height, with the fabric installed on the fence on the upstream side.
- Silt fences shall be used only on sheet flow conditions.
- Silt fences shall be installed around all storm sewer structures.

MAINTENANCE

- Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.
- Necessary repairs to barriers or replacement of bales shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the silt fence barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

KRISPY KREME DOUGHNUTS SPECIFICATION SHEET

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DRAWN BY: J.T.R. DATE: 03/30/99 CHECKED BY: K.E.R. DATE: 03/30/99 JOB NUMBER: 98-1551 SHEET: C2 of 8