



Federal Emergency Management Agency

Washington, D.C. 20472

OCT 17 2005

OCT 20 2005

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:
Case No.: 05-08-0557R

The Honorable Noel Busck
Mayor, City of Thornton
9500 Civic Center Drive
Thornton, CO 80229

Community: City of Thornton, CO
Community No.: 080007

104

Dear Mayor Busck:

This responds to a request that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) comment on the effects that a proposed project would have on the effective Flood Insurance Rate Map (FIRM) for Adams County, Colorado and Incorporated Areas (the effective FIRM for your community), in accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations. In a letter dated June 22, 2005, Mr. Sean V. Berzins, P.E., Manhard Consulting, Ltd., requested that FEMA evaluate the effects that proposed channel modifications associated with the Fuller Subdivision along Todd Creek Tributary 2 from approximately 550 feet downstream of Quebec Street to just downstream of Monaco Street would have on the flood hazard information shown on the effective FIRM. The proposed modifications will include construction of two 9-foot by 5-foot reinforced-concrete box culverts (RCBs) beneath Monaco Street; construction of two 10-foot by 5-foot RCBs at a new culvert crossing located approximately 1,630 feet upstream of Quebec Street; construction of two 10-foot by 6-foot RCBs beneath Quebec Street; channelization of Todd Creek Tributary 2; placement of fill; and grading. Although a portion of the proposed revision area is shown on the effective FIRM as in the unincorporated areas of Adams County, this area was annexed by the City of Thornton.

The Special Flood Hazard Area (SFHA), the area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood), along this reach is designated Zone A, with no Base Flood Elevations determined.

All data required to complete our review of this request for a Conditional Letter of Map Revision (CLOMR) were submitted with letters from Mr. Berzins.

We reviewed the submitted data and the data used to prepare the effective FIRM for your community and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. The submitted existing conditions HEC-RAS hydraulic computer model, dated June 15, 2005, based on updated topographic information, was used as the base conditions model in our review of the proposed conditions model for this CLOMR request. We believe that, if the proposed project is constructed as shown on the drawing entitled "Fuller Subdivision, Thornton, Colorado, Proposed Conditions Hydraulic Workmap, Sheet 2 of 2," prepared by Manhard Consulting, Ltd., dated June 15, 2005, and the data listed below are received, the floodplain boundaries of the base flood will be delineated as shown on the above-referenced drawing.

The existing conditions HEC-RAS model, based on new topographic information along Todd Creek Tributary 2, established an existing conditions profile of water-surface elevations (WSELs) for the base flood. As a result of the proposed project, the base flood WSELs will increase and decrease compared to

the existing conditions base flood WSELs. The maximum increase in base flood WSEL, 0.7 foot, will occur approximately 980 feet downstream of Monaco Street. The maximum decrease in base flood WSEL, 9.5 feet, will occur approximately 450 feet downstream of Monaco Street.

As a result of the proposed project and updated topographic information, the width of the SFHA will increase in some areas and decrease in other areas compared to the effective SFHA width. The maximum increase in SFHA width, approximately 110 feet, will occur approximately 70 feet upstream of Quebec Street. The maximum decrease in SFHA width, approximately 610 feet, will occur approximately 380 feet downstream of Monaco Street.

Upon completion of the project, your community may submit the data listed below and request that we make a final determination on revising the effective FIRM.

- Detailed application and certification forms, which were used in processing this request, must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview & Concurrence Form," must be included. (A copy of this form is enclosed.)
- The detailed application and certification forms listed below may be required if as-built conditions differ from the preliminary plans. If required, please submit new forms (copies of which are enclosed) or annotated copies of the previously submitted forms showing the revised information.

Form 2, entitled "Riverine Hydrology & Hydraulics Form"

Form 3, entitled "Riverine Structures Form"

Hydraulic analyses, for as-built conditions, of the base flood, together with a topographic work map showing the revised floodplain boundaries, must be submitted with Form 2.

- Effective September 1, 2002, FEMA revised the fee schedule for reviewing and processing requests for conditional and final modifications to published flood information and maps. In accordance with this schedule, the current fee for this map revision request is \$3,800 and must be received before we can begin processing the request. Please note, however, that the fee schedule is subject to change, and requesters are required to submit the fee in effect at the time of the submittal. Payment of this fee shall be made in the form of a check or money order, made payable in U.S. funds to the National Flood Insurance Program, or by credit card. The payment must be forwarded to the following address:

Federal Emergency Management Agency
 Fee-Charge System Administrator
 P.O. Box 22787
 Alexandria, VA 22304

- As-built plans, certified by a registered professional engineer, of all proposed project elements
- Community acknowledgment of the map revision request

- An officially adopted maintenance and operation plan for the reach of Todd Creek Tributary 2 within the Fuller Subdivision. This plan, which may be in the form of a written statement from the community Chief Executive Officer, an ordinance, or other legislation, must describe the nature of the maintenance activities, the frequency with which they will be performed, and the title of the local community official who will be responsible for ensuring that the maintenance activities are accomplished.

After receiving appropriate documentation to show that the project has been completed, FEMA will initiate a revision to the FIRM.

The basis of this CLOMR is, in whole or in part, a channel-modification/culvert project. NFIP regulations, as cited in Paragraph 60.3(b)(7), require that communities assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management regulations. Consequently, the ultimate responsibility for maintenance of the modified channel and culverts rests with your community.

This CLOMR is based on minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all floodplain development and for ensuring all necessary permits required by Federal or State law have been received. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in the SFHA. If the State, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

If you have any questions regarding floodplain management regulations for your community or the NFIP in general, please contact the Consultation Coordination Officer (CCO) for your community. Information on the CCO for your community may be obtained by calling the Director, Mitigation Division of FEMA in Denver, Colorado, at (303) 235-4830. If you have any questions regarding this CLOMR, please call our Map Assistance Center, toll free, at 1-877-FEMA MAP (1-877-336-2627).

Sincerely,



Lloyd A. Hake, Project Engineer
Hazard Identification Section
Mitigation Division
Emergency Preparedness
and Response Directorate

For: Doug Bellomo, P.E., Chief
Hazard Identification Section
Mitigation Division
Emergency Preparedness
and Response Directorate

Enclosures

cc: Mr. Frank Casteleneto, P.E.
Floodplain Administrator
City of Thornton

Mr. Bill DeGroot, P.E.
Manager, Floodplain Management Program
Urban Drainage and Flood Control District

Ms. Barbara Morris
Todd Creek Village L.L.C.

Mr. Sean V. Berzins, P.E.
Manhard Consulting, Ltd.

CONDITIONAL LETTER OF MAP REVISION TODD CREEK TRIBUTARY 2

**Fuller Subdivision
City of Thornton, Adams County, Colorado**

Prepared for:

Equinox Group, LLC
9055 E. Mineral Circle, Suite 200
Centennial, Colorado 80112

Prepared by:



Manhard Consulting, Ltd.

Manhard Consulting, Ltd.
345 Inverness Drive South, Suite B200
Englewood, Colorado 80112
(303) 708-0500

June 2005

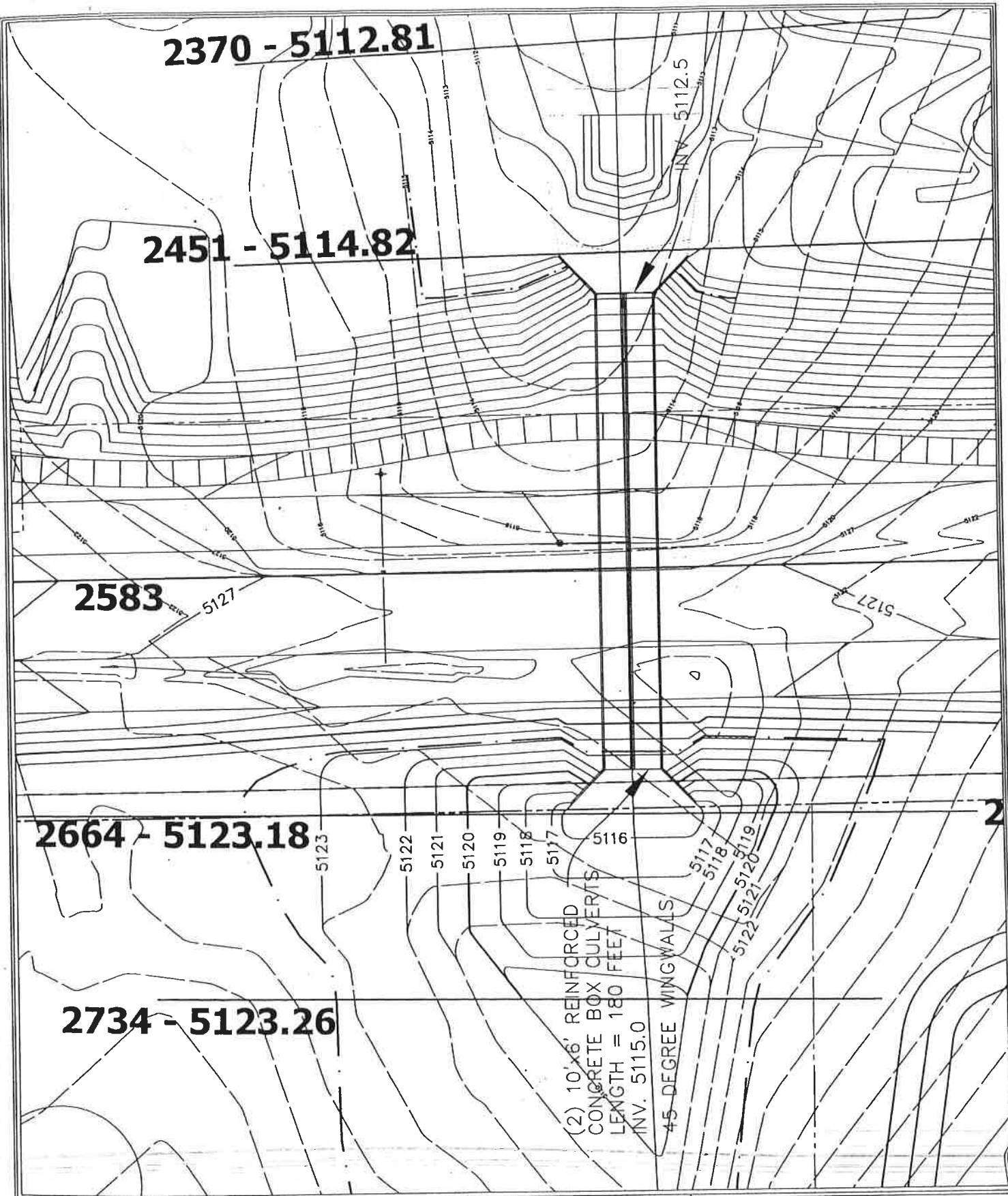
Project # EGTNC (C-329)

RECEIVED

JUL 06 2005

CITY DEVELOPMENT

MANHARD CONSULTING, LTD. 345 INVERNESS DRIVE SOUTH, SUITE B200, ENGLEWOOD, CO 80112



FULLER SUBDIVISION THORNTON, COLORADO QUEBEC STREET CULVERT

PROJ. MGR.: SVB
 DRAWN BY: JC
 DATE: 6-16-05
 SCALE: 1" = 50'

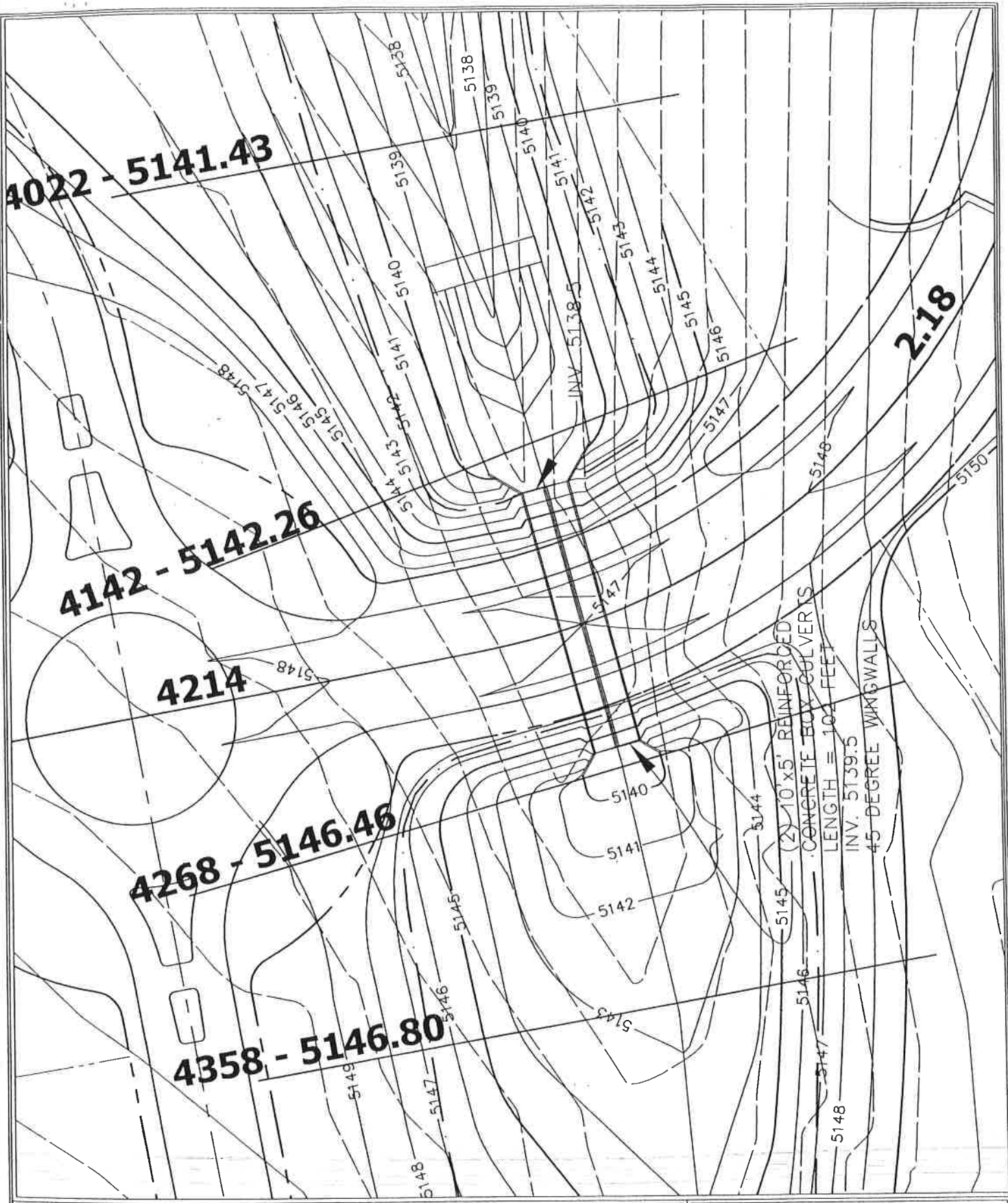


Manhard Consulting, Ltd.

Civil Engineers • Surveyors • Water Resources Engineers • Water & Wastewater Engineers
 Environmental Scientists • Landscape Architects • Planners • Construction Managers

14505 North Hayden Road, Suite 340 • Scottsdale, AZ 85260 • 480.946.5550 • 480.946.5599 FX • www.manhard.com

SHEET
EXHIBIT 1
 EGTNC C-329



4022 - 5141.43

4142 - 5142.26

4214

4268 - 5146.46

4358 - 5146.80

2.18

(2) 10' x 5' REINFORCED
CONCRETE BOX CULVERTS
LENGTH = 102 FEET
INV. 5139.5
45 DEGREE WINGWALLS

FULLER SUBDIVISION

THORNTON, COLORADO

PROPOSED ROAD CULVERT

PROJ. MGR.: SVB
DRAWN BY: JC
DATE: 6-16-05
SCALE: 1" = 40'



Manhard Consulting, Ltd.

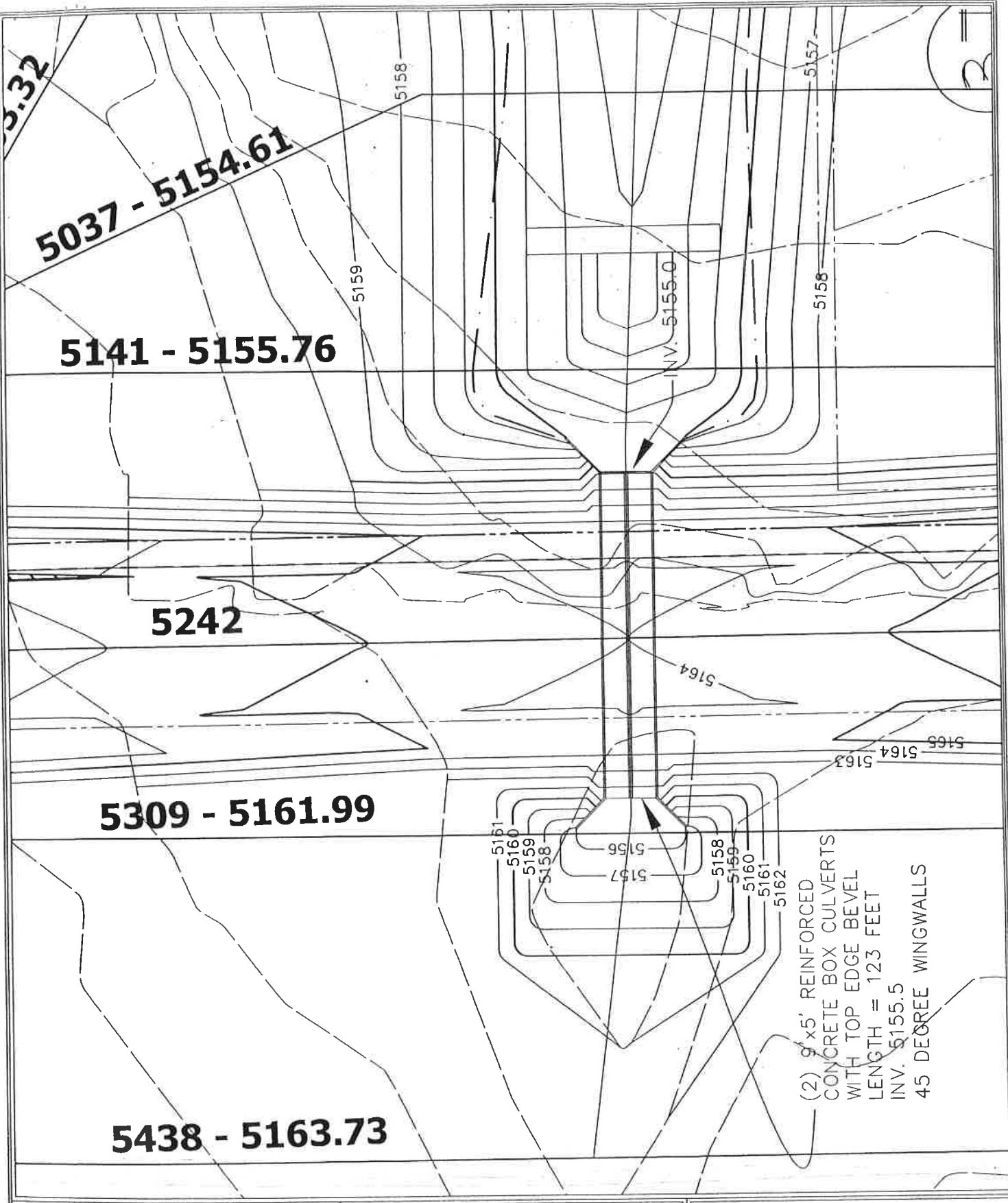
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SHEET

EXHIBIT 2

EGTNC

C-329



FULLER SUBDIVISION

THORNTON, COLORADO

MONACO STREET CULVERT

PROJ. MGR.: SVB
 DRAWN BY: JC
 DATE: 6-16-05
 SCALE: 1"=50'



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SHEET

EXHIBIT 3

EGTNC

C-329