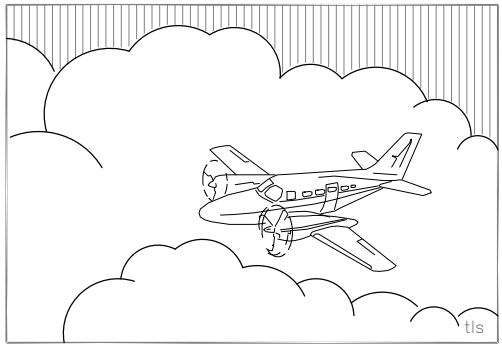
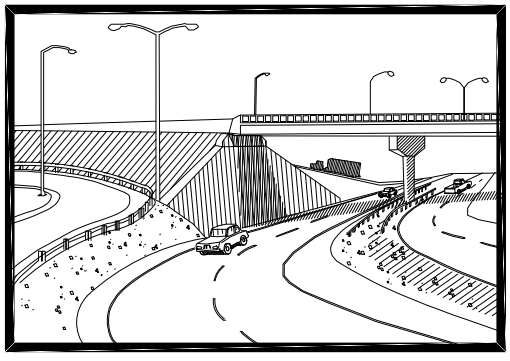
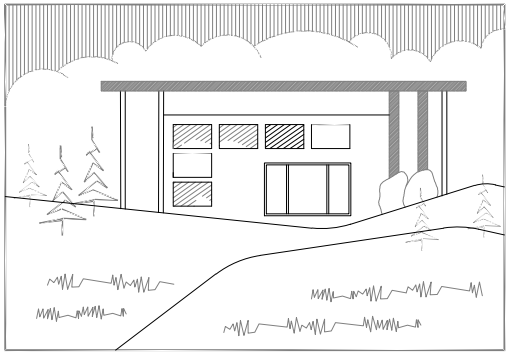
DESIGN STUDY REPORT

RICHARDSON HIGHWAY MP 353-357 ACCESS IMPROVEMENTS

PROJECT NO. IM-HRO-0A24(19)/66148

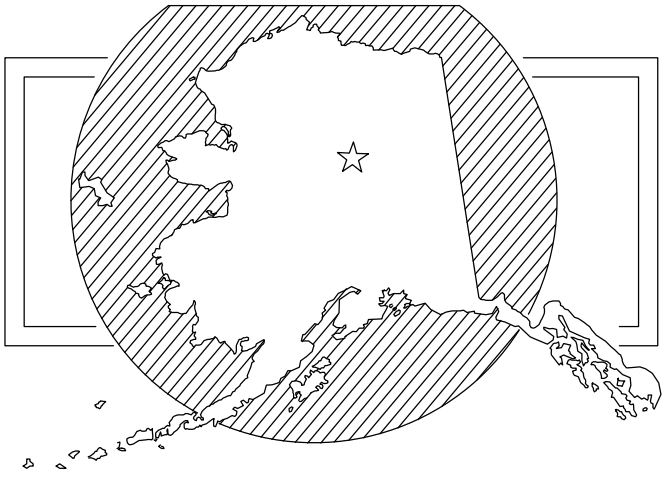






STATE OF ALASKA

Department of Transportation and Public Facilities



NORTHERN REGION

DECEMBER 2012

DESIGN APPROVAL

PROJECT NO. IM-HRO-0A24(19)/66148

RICHARDSON HIGHWAY MP 353-357 ACCESS IMPROVEMENTS

Requested by: _____ 12/27/2012

Sarah Schacher, P.E. Date
Engineering Manager
Northern Region

Design Approval Granted: _____ 12/20/12

Longin Krol, P.E. Date
Preconstruction Engineer
Northern Region

Distribution:
QA Engineer
Right of Way Chief
Planning Chief
Preconstruction Engineer
Materials Engineer
Environmental Coordinator
Project Control Chief
Utilities Engineer
PD&E Chief
Regional M&O Manager
Hydraulics Engineer
Regional Director
Design Group Chief
Traffic and Safety Engineer
Regional Geologist
M&O Maintenance Engineer
M&O Foreman
Engineering Manager
Contracts Engineer
Peter Forsling, Northern Region Area Engineer, FHWA
The Honorable John B. Coghill, Jr., Alaska State Senator
The Honorable Joe Paskvan, Alaska State Senator
The Honorable Steve Thompson, Alaska State Representative
The Honorable Tammie Wilson, Alaska State Representative
Bernardo Hernandez, Community Planning Director,
Fairbanks North Star Borough
Kellen Spillman, Transportation Planner, Fairbanks North Star Borough
The Honorable Luke Hopkins, Mayor, Fairbanks North Star Borough

DESIGN STUDY REPORT
FOR
RICHARDSON HIGHWAY MP 353-357 ACCESS IMPROVEMENTS

FEDERAL PROJECT NO. IM-HRO-0A24(19)
STATE PROJECT NO. 66148

PREPARED BY: PDC INC. ENGINEERS

UNDER THE SUPERVISION OF:
Keith Hanneman, P.E.

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

December 2012

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APPENDICES

1 INTRODUCTION/HISTORY

The State of Alaska Department of Transportation & Public Facilities (DOT&PF), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve access and safety of the Richardson Highway between Mileposts (MP) 353 and 357 (Figure 1). Earlier this year, DOT&PF retained PDC Inc. Engineers to advance the improvement concept developed by DOT&PF in 2006 through the Design Study Report (DSR) and design stages. Kinney Engineering, LLC, provided the traffic analysis.

The Richardson Highway, a National Highway System (NHS) route, is the main arterial between Fairbanks and North Pole and continues south to Valdez. The project is located within a four-lane, divided, 55-mph section of the Richardson Highway. Traffic volumes have increased approximately 25 percent over the past 20 years as the corridor and surrounding area have both experienced growth in the development of commercial and industrial businesses and residential areas. Existing average daily traffic (ADT) is approximately 14,000 vehicles, projected to increase to 23,000 by the design year (2035).

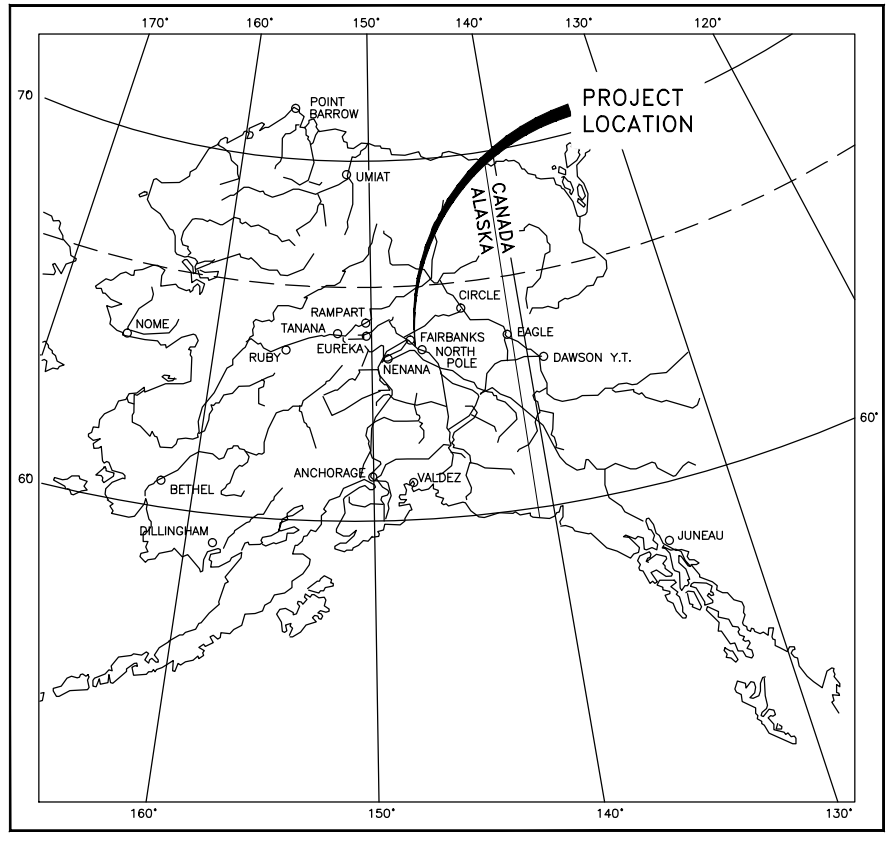
When the original four-lane section was built in 1966, surrounding development did not immediately justify building frontage roads. Consequently, the original right-of-way (ROW) maps designated specific access road breaks to serve the limited access needs. Partial development of frontage roads began in 1973 and continued through 1986, gradually introducing more direct access points in the corridor. The present partial frontage road system connects to the Richardson Highway via six at-grade intersections, with a seventh direct access point (right-in/right out) to the eastbound side of the highway near MP 353. Several of these intersections are within 0.2 miles of each other, which is quite close on a high-speed facility.

The objective of this project is to improve safety and capacity on the Richardson Highway while maintaining reasonable access to the parcels adjacent to the project corridor via the frontage road system. This will be accomplished by establishing access control similar to that of the rest of the four-lane section of the Richardson Highway to the east and by improving the existing frontage road system. This will involve:

- Consolidating five existing at-grade highway intersections into two new at-grade intersections flanked by acceleration and deceleration lanes
- Closing the median at one intersection to make separate right-in/right-out intersections for eastbound and westbound traffic
- Adding acceleration and deceleration lanes to an existing right-in/right-out intersection for eastbound traffic
- Illuminating the two new intersections and the new acceleration/deceleration lanes
- Extending and improving the southern frontage road in order to enhance its use both for property access and as a secondary route to the Badger Road Interchange

The Richardson Highway is a partial-access-controlled facility. This project will modify breaks in the access control line and document those changes in the ROW base map process. The frontage roads are common-access-controlled; driveways may not be constructed without a permit from DOT&PF.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	1	1



BEGIN PROJECT

END PROJECT

DENNIS RD

ALASKA RAILROAD

OLD RICHARDSON HWY

BADGER RD

WESCOTT GARDEN LN

RICHARDSON HWY

LU ANNE RD

DAVISON ST

BETHANY ST

MIDLAND ST

EL PASO ST

SINCLAIR AVE

ROZAK RD

CHANNEL "B"

LEVEE WAY

COBB RD

FAIRBANKS 4 MILES

NORTH POLE 3 MILES

600 300 0 600 1200 1800
SCALE IN FEET

FIGURE 1
VICINITY MAP

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2 PROJECT DESCRIPTION

2.1 Location

The project corridor (shown on Figure 1) is located along the Richardson Highway between Fairbanks and North Pole. It begins at the eastern edge of the 6-Mile/Badger Road Interchange (MP 356.6) and continues east for approximately 3 miles to east of Black Gold Express (MP 353.6).

Frontage roads extend along the north side of the highway from west of Wescott Garden Lane to directly across from Bethany Street (0.4 miles) and along the south side from LuAnne Road to the At Ease Childcare (1.4 miles). On both sides, the frontage roads lie between the access control fence 100 feet out from the highway centerline and the ROW edge 150 feet from the highway centerline.

Seven at-grade intersections (described in Table 1 in Section 2.2) exist within the project limits.

2.2 Condition of Existing Facilities

2.2.1 Highway and Frontage Roads

This portion of the Richardson Highway was constructed in 1966 as a divided four-lane highway. The present configuration of the southern frontage road was constructed in 1986.

Between 1985 and 1989, the Badger Road intersection was improved and the surrounding access and frontage road system was upgraded. In 2004, the at-grade intersection at Badger Road was replaced with an interchange. The interchange project also reconstructed the portion of the south frontage road from the new interchange to LuAnne Road.

A 2007 project repaved the Richardson Highway from MP 348 to MP 357.

The Richardson Highway embankment and pavement are in good condition. Pavement on the frontage roads appears weathered and aged. The easternmost 1.25 miles of the southern frontage road has a settled profile, irregular surface, and cracking due to settlement beneath the road embankment or loss of support from the foundation soils at the toe of the embankment.

2.2.2 Intersections

Table 1 lists the locations, types, and presence of acceleration and deceleration lanes for the at-grade intersections within the project limits.

Table 1 – Existing Intersections

Street Name	Milepost	Type	Acceleration/ Deceleration Lanes
Wescott Garden Lane/ LuAnne Road	356.2	4-way	Right and left lanes, each direction
Davison Street	356.0	4-way	No
Midland Street	355.5	3-way, from/to south side	No
End of the South Frontage Road (At Ease Childcare)	354.8	3-way, from/to south side	No
Rozak Road	354.6	4-way	No
Old Richardson Highway	354.4	3-way, from/to north side	No
Black Gold Express/ Hamilton Construction	353.6	2-way, right-in/right-out for eastbound traffic only	No

The Wescott Garden/LuAnne Road intersection has 620-foot acceleration and 425-foot deceleration lanes in each direction, rather than the desired 1,600 feet for acceleration and 600 feet for deceleration.

2.3 Purpose and Need

The purpose of this project is to improve safety and capacity on this four-lane, high-traffic section of the Richardson Highway while maintaining reasonable access to the parcels adjacent to the project corridor via the frontage road system. Safety and capacity concerns associated with the many closely spaced intersections along the project corridor, the lack of lighting, and the poor condition of the surfaces of the access roads include:

- Proximity of intersections creates a high number of potential conflict points and leaves drivers with little time or distance to react.
- Lack of adequate acceleration/deceleration lanes increases the potential for conflicts between merging vehicles and through traffic.
- Lack of lighting limits drivers' ability to see other traffic and moose in low-light conditions.
- Intersection geometry is not suited to use by large trucks, which can block the intersections.
- Insufficient connectivity to Badger Road Interchange causes drivers who might otherwise use the interchange to enter and exit the highway via the at-grade intersections.
- Deteriorating pavement on the southern frontage road requires frequent, extensive patching and crack sealing efforts by DOT&PF Maintenance.

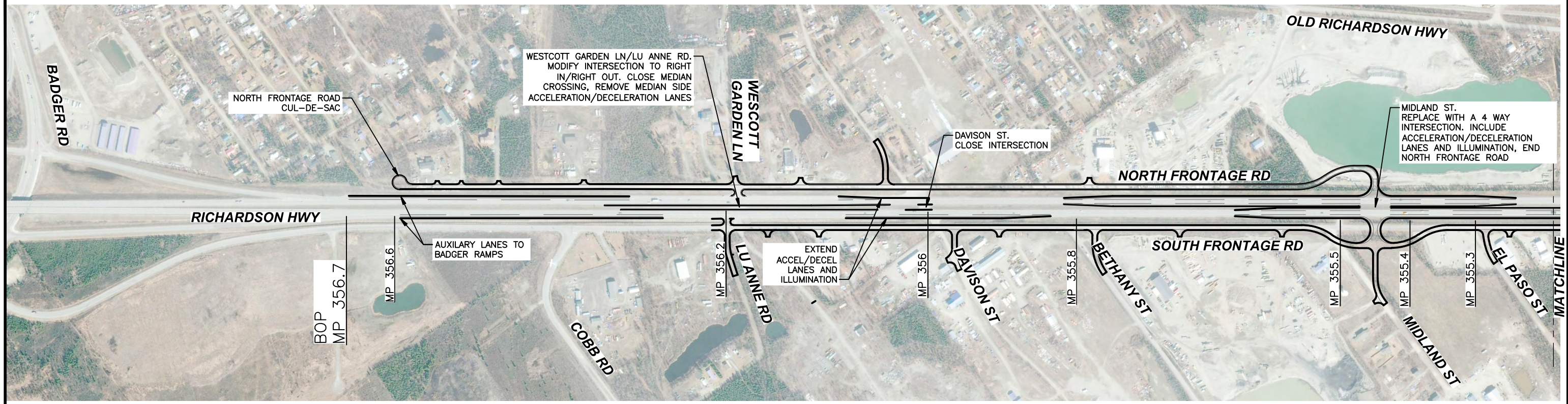
2.4 Proposed Improvements

In order to maintain mobility on the highway while serving the need for access to the surrounding areas, the existing frontage roads on the north and south sides of the highway will be improved or extended and access points will be consolidated into improved intersections. Figure 2 shows the proposed extensions of the frontage roads and improvements at each intersection.

The discussion below groups the proposed improvements into four general categories:

- Reducing the number of intersections
- Improving the remaining intersections, to include adding acceleration/deceleration lanes and lighting
- Extending and improving the north frontage road
- Extending and improving the south frontage road

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	1	1



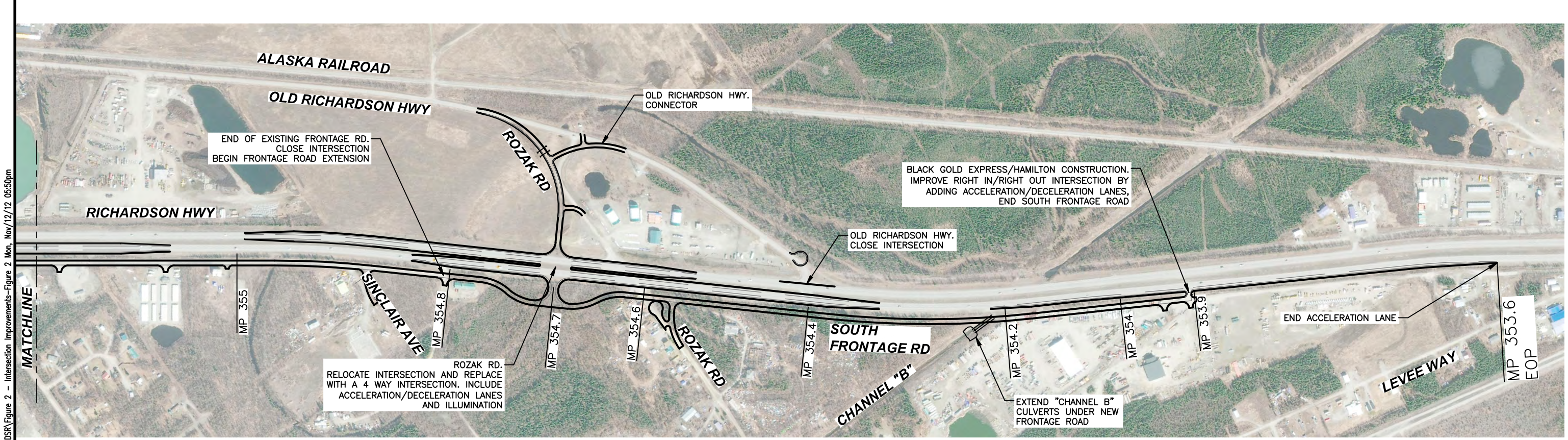


FIGURE 2
PROPOSED IMPROVEMENTS

P:\2012\12009FB\5Rprts\DSR\Figure 2 - Intersection Improvements-Figure 2 Mon, Nov/12/12 05:50pm

2.4.1 Reducing the Number of Intersections

At the LuAnne Road/Wescott Garden Lane intersection, the median will be closed to create separate right-in/right-out intersections for eastbound and westbound traffic.

Existing intersections at Davison Street, at the end of the existing south frontage road (west of Rozak Road), and at the Old Richardson Highway will be closed.

The intersections at Midland Street and at Rozak Road will be replaced. On the north side of the Richardson Highway, Rozak Road will be realigned to connect the Old Richardson Highway to the new four-way intersection. The portion of the Old Richardson Highway between Rozak Road's old connection point on the west side and its new connection point on the east side will be abandoned. The eastern spur will connect Rozak Road to the Old Richardson and end in a cul-de-sac near the existing intersection with the Richardson Highway.

2.4.2 Improving the Remaining Intersections

Improvements to enhance safety and traffic flow will include:

- Extending acceleration/deceleration lanes at the LuAnne Road and Wescott Garden Lane right-in/right-out intersections
- Adding acceleration/deceleration lanes at the Black Gold Express/Hamilton Construction right-in-right-out intersection for eastbound traffic
- Adding lighting at the Midland Street and Rozak Road intersections and their acceleration/deceleration lanes
- Adding lighting between the acceleration/deceleration lanes to make it easier for drivers to see other vehicles on the road as well as moose crossing the roadway
- Improving the geometry of the intersections to handle large trucks

2.4.3 Extending and Improving the North Frontage Road

The north frontage road will begin with a new cul-de-sac near Bright Electric (MP 356.6) and continue 1.1 miles, past Davison Street and along the front of the Exclusive Paving properties, to end at a new four-way intersection with Midland Street (MP 354.9).

2.4.4 Extending and Improving the South Frontage Road

The south frontage road improvements will begin at LuAnne Road (MP 356.2), continue through the newly realigned Midland Street intersection, and generally follow the existing alignment to its end at At Ease Childcare (MP 354.8). At this point new construction will begin. The frontage road extension will connect to the newly aligned four-way intersection at Rozak Road, continue to the east, pass over extensions of the Fairbanks North Star Borough (FNSB) Flood Control Project Channel B Culverts, and end at the access to the Black Gold Express/Hamilton Construction properties (MP 353.8). The resulting 2.3 miles of improved frontage road will provide continuous frontage road access from the Black Gold Express property through to the Badger Road interchange, which gives the public the option of driving to the interchange instead of entering or crossing the highway at an at-grade intersection.

3 DESIGN ALTERNATIVES

The overall concept for this project was developed by DOT&PF in 2006. That concept established the extents of the frontage roads, the intersection locations, and the general layout for connecting Rozak Road to the Old Richardson Highway. For this DSR, the consultant's scope of work was to review (and update if needed) the locations of the intersections, the intersection geometry, and options for improving the efficiency and safety of the left-turn movements.

Design alternatives were developed and evaluated for the following aspects of the project:

- Intersection locations
- Intersection improvements
- Left-turn alternatives

3.1 Intersection Locations

To guide the location of the intersections, the required spacing to accommodate acceleration/ deceleration lanes and weaving maneuvers was analyzed. The analysis is presented in the *Richardson Hwy MP 353-357 Access Improvements: Traffic Analysis Report* (Kinney Engineering, LLC, November 2012) and summarized below.

Because of the high-speed and free-flowing nature of the Richardson Highway traffic, intersections in the corridor were treated as freeway interchanges and acceleration/deceleration lanes treated as freeway ramps for the purpose of determining minimum and desirable auxiliary lane lengths and spacing between successive ramp terminals. The following assumptions were made:

- Through-traffic design speed of 70 mph
- For acceleration lanes, acceleration from 15 mph turning roadway speed to 70 mph
- For deceleration lanes, deceleration from 70 mph to 15 mph turning roadway speed
- Left turns:
  - NCHRP Report 279 analysis techniques were used to determine minimum and desirable left turn lane lengths
  - Vehicle storage requirements came from the HCM2010 Unsignalized Intersection analysis

Using the freeway procedure from *A Policy on Geometric Design of Highways and Streets*, American Association of State Highway and Transportation Officials (AASHTO), 2011, recommended values for interchange ramp and spacing are as follows:

- Minimum 1,000 feet between interchange ramps with an auxiliary lane between the ramps
- Minimum 1,500 feet between interchange ramps without an auxiliary lane
- 600-foot deceleration lanes
- 1,600-foot acceleration lanes

These AASHTO-recommended values for lane length, weaving distance, and interchange spacing were greater than the minimum values in DOT&PF's *Highway Preconstruction Manual* (PCM), so the AASHTO values were used. The acceleration lane length is similar to what exists for westbound traffic on the Richardson at 12-Mile Village (about 2.75 miles east of this project), where heavy trucks carrying fuel from the Flint Hills Refinery to Fairbanks enter the highway.

Design alternatives specific to certain intersections are discussed below.

3.1.1 LuAnne Road/Wescott Garden Lane

The intersection spacing analysis showed that the distance between the eastbound terminals of the Badger Road Interchange and the proposed extension of the deceleration lane approaching the LuAnne Road intersection meets the AASHTO recommendation for ramp terminal spacing. However, since the distance is less than 1,500 feet, AASHTO recommends providing a continuous auxiliary lane between these two terminals.

Westbound, the end of the proposed extension to the Wescott Garden intersection's acceleration lane is only 800 feet away from the beginning of the Badger Road Interchange exit ramp. This does not meet the AASHTO recommendations for ramp terminal spacing, even if a continuous auxiliary lane were added. To meet the AASHTO guidelines, the Wescott Garden Lane side of this intersection would need to be relocated a minimum of 200 feet to the east and a continuous auxiliary lane installed from the Wescott Garden Lane right turn on-ramp to the Badger Road off-ramp. Moving the Wescott Garden Lane intersection 200 feet to the east would, however, require either moving the new Midland Street intersection about 200 feet east of its present location or else installing a continuous auxiliary lane from Midland Street to Wescott Garden Lane as well.

Thus, we evaluated two options on the north side of the highway (westbound traffic): 1) leaving the existing intersection in place and 2) shifting the Wescott Garden and Midland intersections to provide the desired separation.

Leaving the Wescott Garden intersection in place would leave the end of the westbound acceleration lane and the start of the Badger Road off-ramp closer than the recommended spacing. Providing the recommended continuous auxiliary lane between these two ramp terminals should give drivers enough room to adjust their speeds to avoid conflict. This is especially true since the projected traffic turning onto the highway at the Wescott Garden intersection is quite low, only 20 vehicles per peak hour in the design year.

Shifting the intersection would provide some safety benefit, as drivers would have the full recommended distance to adjust their speeds. The downside is that the intersection would be offset from Wescott Garden Lane by 200 feet and several hundred feet of the side street would have to be rerouted through private property to connect to the new intersection. This would also impact the location of the Midland Street intersection, as discussed above.

3.1.2 Midland Street

The intersection spacing analysis found that the Midland Street intersection needed to be positioned no closer to Wescott Garden Lane than the existing distance in order to avoid adding a continuous auxiliary lane between these two intersections. However, the proposed design for this intersection has a larger footprint than the existing intersection, so ROW impacts must be considered as well.

We evaluated the two options: 1) reconstructing the Midland Street intersection in place and 2) shifting the intersection 200 feet eastward, both to provide additional separation from Wescott Garden Lane and to minimize ROW impacts.

Reconstructing the intersection in place would likely require acquisition of a satellite imagery facility on the southwest quadrant of the intersection. The new layout would also move the north

frontage road significantly closer to a private residence on the northwest quadrant of the intersection.

Shifting the Midland intersection about 200 feet to the east would both reduce the acquisition from the satellite imagery facility to just a portion of the parking lot and maximize the separation between the north frontage road and the residence. However, at this location the northern curve where the frontage road meets the intersection would need to cross Exclusive Paving's gravel pit, which is reported to be 60 feet deep at the edge and 80 feet deep in the middle. Placing fill into the gravel pit would add a bit of complexity to the design and construction, but since the foundation soils are gravel, there should not be any long-term stability concerns. This alternative would also require realigning several hundred feet of Midland Street through undeveloped private property.

It should be noted that shifting the Wescott Garden intersection 200 feet eastward to provide the recommended separation from the off-ramp, as discussed above, would require a similar shift of the Midland intersection in order to avoid installing a continuous auxiliary lane between the two intersections. The shift discussed in the paragraph above would satisfy this requirement.

3.2 Intersection Improvements

For the two new intersections at Midland Street and Rozak Road, concepts were developed to evaluate accommodating the WB-65 or the Alaska Double and determine what the associated ROW footprint would be.

PDC first developed a concept that would allow one Alaska Double to queue up roughly perpendicular to the Richardson Highway on the highway side of the frontage road so that the driver could observe traffic and wait for a suitable gap before turning into the acceleration lane. For an Alaska Double to do this without encroaching on the opposite lane of the intersection required an intersection "throat" several hundred feet long. This imposed an unacceptable footprint on the adjacent private ROW, so that concept was abandoned.

Moving forward, we developed a new alternative using the following design criteria:

- Design for an AASHTO WB-65 (similar to a side dump). Provide turning movements for the design vehicle that do not require encroaching into the opposite lane.
  - The Alaska Administrative Code does not require provision for Alaska Doubles along frontage roads. However, we did check that the Alaska Double could negotiate the intersection either by off-tracking onto widened shoulders or by encroaching into the other lane after waiting for it to clear.
- Provide room for one WB-65 to queue up roughly perpendicular to the Richardson Highway on the highway side of the frontage road so that the driver could observe traffic and wait for a suitable gap before turning into the acceleration lane.
  - Alaska Doubles can wait on the frontage road for traffic to clear and then use both lanes in the intersection to square up to the highway or roll right onto the acceleration lane.
  - Additional trucks can queue along the frontage road.
- Widen shoulders on the inside of the curves to allow off-tracking as required for both WB-65 and Alaska Double.
- Provide dedicated turn lanes along the frontage road wherever queuing on the frontage road would create capacity or level-of-service (LOS) problems.

The swept paths of the turning movements of both the WB-65 and the Alaska Double are shown below.

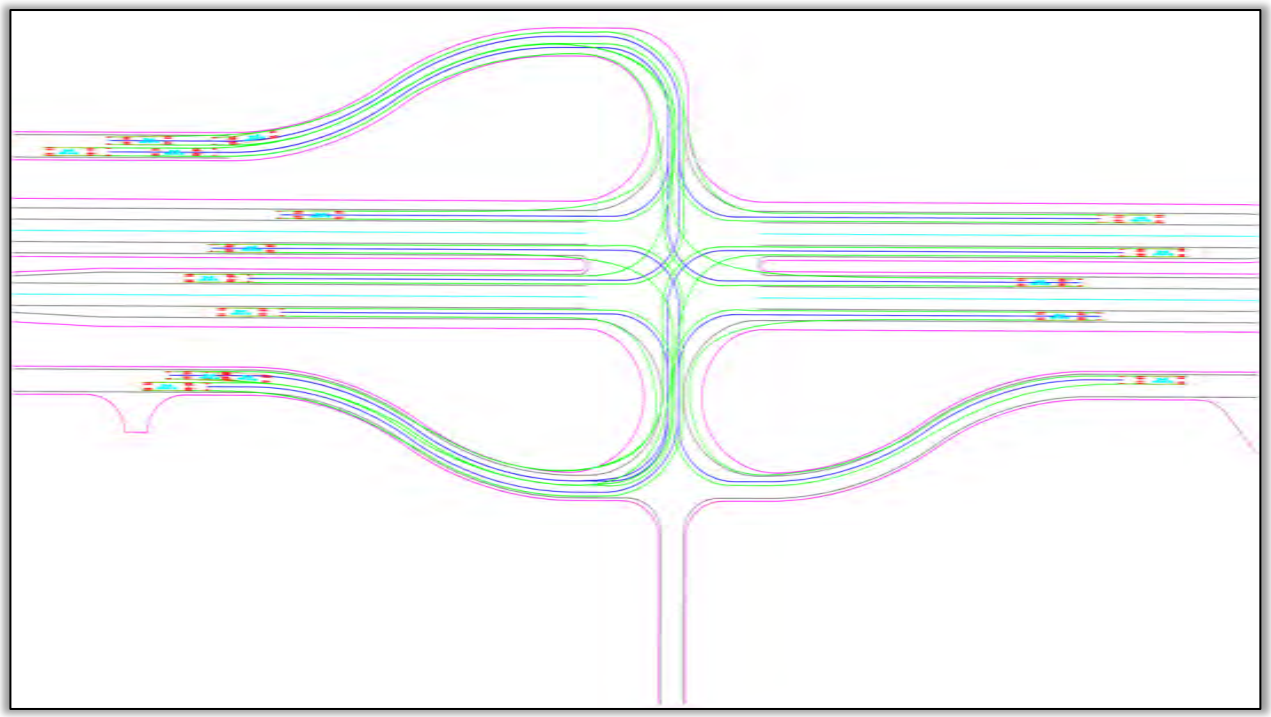


Figure 3 – Turning Movements for WB-65

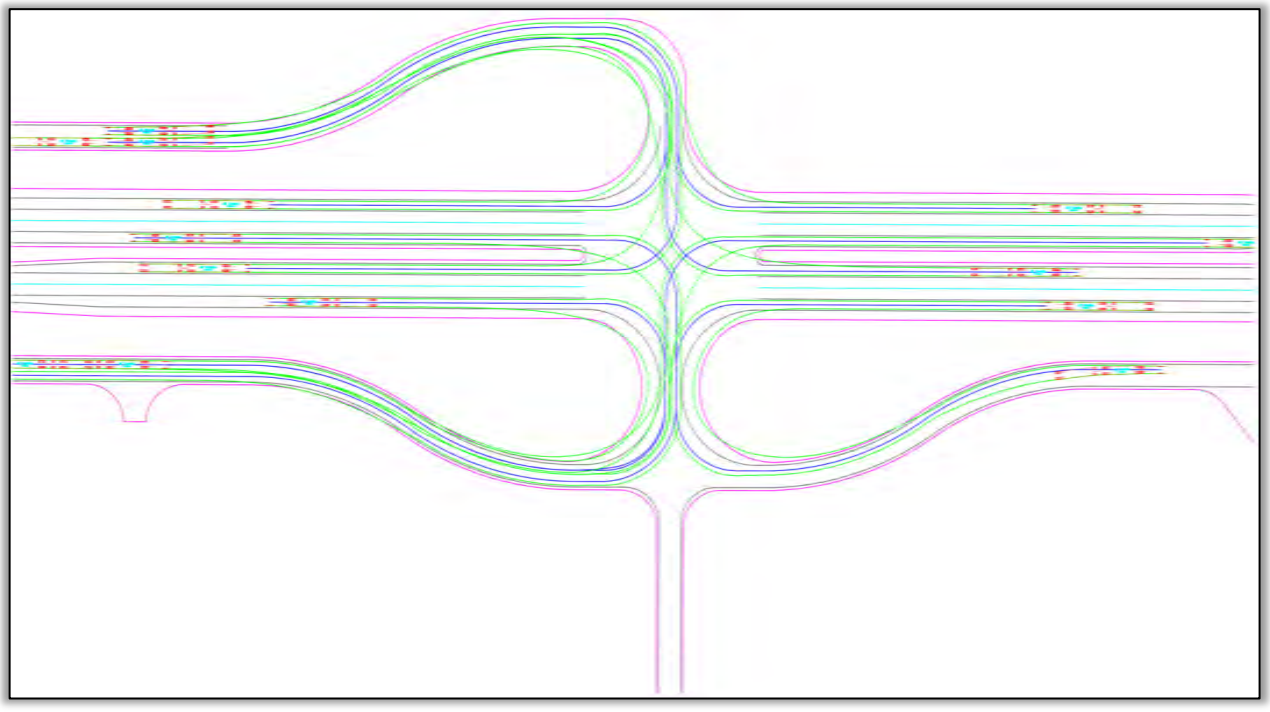


Figure 4 – Turning Movements for Alaska Double

3.3 Left Turn Alternatives

Kinney Engineering evaluated three concepts for treatments to improve safety and reduce stop delays attributed to direct left-turn movements at Midland Street and Rozak Road. These left turns have the longest delay of any of the turning movements because the driver must wait for an appropriate gap to safely cross two lanes of traffic and merge into traffic on the far side of the median.

- **Left turn acceleration lanes within the median** would allow left-turning drivers to complete the maneuver in two stages (cross the near two lanes and then turn left and accelerate/merge into traffic on the far side) so they can address conflicts in one direction at a time.
- **Directional median opening (U-turn) intersection treatments** would allow left-turning drivers to complete the maneuver in multiple steps (turn right and accelerate/merge into nearest lane; weave through traffic in left lane and into deceleration lane; pick an appropriate gap in traffic, make a U-turn, accelerate up to the speed of the traffic, and merge into shoulder side traffic) so they can address conflicts one maneuver at a time.
- **Closed medians with grade-separated highway crossover points** would allow left-turning drivers to complete the maneuver in stages by first crossing over the roadway and then turning left and merging into the traffic from an on-ramp.

Table 2 summarizes the advantages and disadvantages of each of these treatments.

Table 2 – Comparison of Left Turn Alternatives

Alternative	Advantages	Disadvantages	Costs
Left-Turn Acceleration Lanes	• Vehicles not required to drive out-of-direction to access the Richardson Highway • Lowest overall delay • Trucks can use the left-turn acceleration lanes to wait in the median until a suitable gap is identified for acceleration and merging	• Northbound or southbound through volumes will conflict with left turning traffic attempting to enter the left turn acceleration lanes • Safety and operational problems could result, but peak PM hour projected traffic levels for through maneuvers are fairly low in the design year with the 2% growth projection (22 at Midland and 3 at Rozak)	• Requires paving an additional 1,600 feet of lane in each direction at both intersections
Directional Median Openings	• Minimizes control delay; all movement LOS C or better for the 2% growth scenarios • Studies have shown right turns followed by U-turn movements to be safer than direct left-turn movements on divided highways • Bringing the U-turn median openings closer to the main intersection helps to minimize geometric delay	• Significant geometric delays result if right-turn acceleration lane ends before U-turn deceleration lane begins • “Loons” (turning roadways outside of the divided highway) needed to allow WB-65 and Alaska Double trucks to make U-turns. These require additional right-of-way at each turning point and present maintenance challenges in the winter.	• Requires median U-turn breaks and deceleration lanes for each median break. Time and cost for acquisition of additional ROW.

Alternative	Advantages	Disadvantages	Costs
Closed Medians with Grade-Separated Crossovers	• Minimizes control delay; all movements LOS C or better. Overall delay is stable over a variety of growth scenarios, so would have a long life at a good LOS. • Highest safety of the three options. All traffic can access the Richardson Highway without making left or U-turns, and through traffic on the side roads never interacts with traffic on the highway.	• Significant geometric delay • Might only be able to build one in this area due to the cost and the length of ramps to the grade-separated crossover • Separated grade facilities present maintenance challenges in the winter because the ramps and bridges frost or clear differently from the mainline	• Requires construction of expensive grade-separated facilities between frontage roads to allow vehicles to cross the Richardson Highway without interacting with it

4 PREFERRED ALTERNATIVES

Proposed improvements are shown on Figure 2 and described below.

4.1 Intersection Locations

4.1.1 Wescott Garden Lane/LuAnne Road

Close the median opening and convert the intersections to right-in/right-out at their existing locations. Addition of auxiliary lanes between the end of the acceleration/deceleration lanes and the Badger Road interchange ramp terminals will give the drivers of vehicles entering and exiting the highway at these intersections extra room to adjust their relative speeds to avoid a conflict. Combined with the low volume of right-turn movements in the design year (peak of 20 per hour), this should mitigate safety concerns.

This location has the least impacts to ROW.

4.1.2 Midland Intersection

Shift the intersection about 200 feet eastward from the existing intersection. This location reduces ROW acquisition from the satellite imagery facility parcel to just a portion of the parking lot; maximizes the separation between the north frontage road and the private residence; and provides adequate separation from the Wescott/LuAnne intersections to meet the AASHTO recommendations if traffic volumes warrant relocation of those intersections in the future.

4.2 Intersection Improvements

Lay out the intersection such that one WB-65 design vehicle can queue roughly perpendicular to the Richardson Highway between the highway and the frontage road. The turning maneuvers of a WB-65 will not encroach on the opposite lane of the intersection. The Alaska Double can be accommodated if the driver waits until the intersection is clear and then uses both lanes as needed to pull roughly perpendicular to the Richardson. Selecting the WB-65 as the design vehicle significantly reduces the amount of ROW to be acquired from the private parcels adjacent to the frontage roads.

4.3 Left Turn Alternatives

Add left turn acceleration lanes within the median. This will enable left-turning drivers to complete the maneuver in stages and address conflicts in one direction at a time with the opportunity to wait in the median opening if needed. Such staging may conflict with north/south through movements, but this portion of the traffic is projected to be fairly low (fewer than 25 vehicles per peak PM hour), so chances of crashes or significant delays are low.

Closed medians with grade-separated crossover points would offer the greatest safety, but constructing them would involve significant additional cost and ROW acquisition. This option may be more suitable in the future should traffic growth warrant the additional cost and ROW impacts.

5 DESIGN STANDARDS

The design criteria for this project are included in Appendix B. The project will be developed in accordance with the following standards:

Agency	Standard
Alaska Department of Transportation and Public Facilities (DOT&PF)	• Highway Preconstruction Manual (PCM) • Applicable Chief Engineer's Directives • Alaska Sign Design Specifications (ASDS) • Alaska Highway Flexible Pavement Design Manual (AKFPD) • Alaska Highway Drainage Manual • FHWA Hydraulic Engineering Circular No. 22, 3rd Edition • Alaska Traffic Manual, 2012 (ATM) • Standard Specifications for Highway Construction, 2004
American Association of State Highway and Transportation Officials (AASHTO)	• A Policy on Geometric Design of Highways and Streets, 2001 (Green Book) • Highway Capacity Manual (HCM) • Highway Safety Manual (HSM) • Informational Guide for Highway Lighting, 1984 (IGRL) • Roadside Design Guide, 2002 • Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1994
American National Standards Institute / Illuminating Engineering Society (ANSI/IES)	• Roadway Lighting, 2000 (RP-8-2000)

6 VALUE ENGINEERING

Value engineering (VE) analyses are now required for projects on the National Highway System receiving federal assistance with an estimated total cost of $50,000,000 or more. This project is funded under MAP-21, "Moving Ahead for Progress in the 21st Century"—the new federal highway program reauthorization that became effective July 6, 2012. However, the project is not anticipated to meet the threshold for total project cost, and therefore a VE study will not be conducted.

7 3R ANALYSIS (N/A)

8 TYPICAL SECTIONS

Typical sections (Figure 5) were developed in accordance with the DOT&PF PCM, the AASHTO Green Book, evaluation of as-built drawings for prior projects in the area, and assumptions about local ground conditions. The typical sections will be refined in more detail once drilling investigations (scheduled for 2013) are complete.

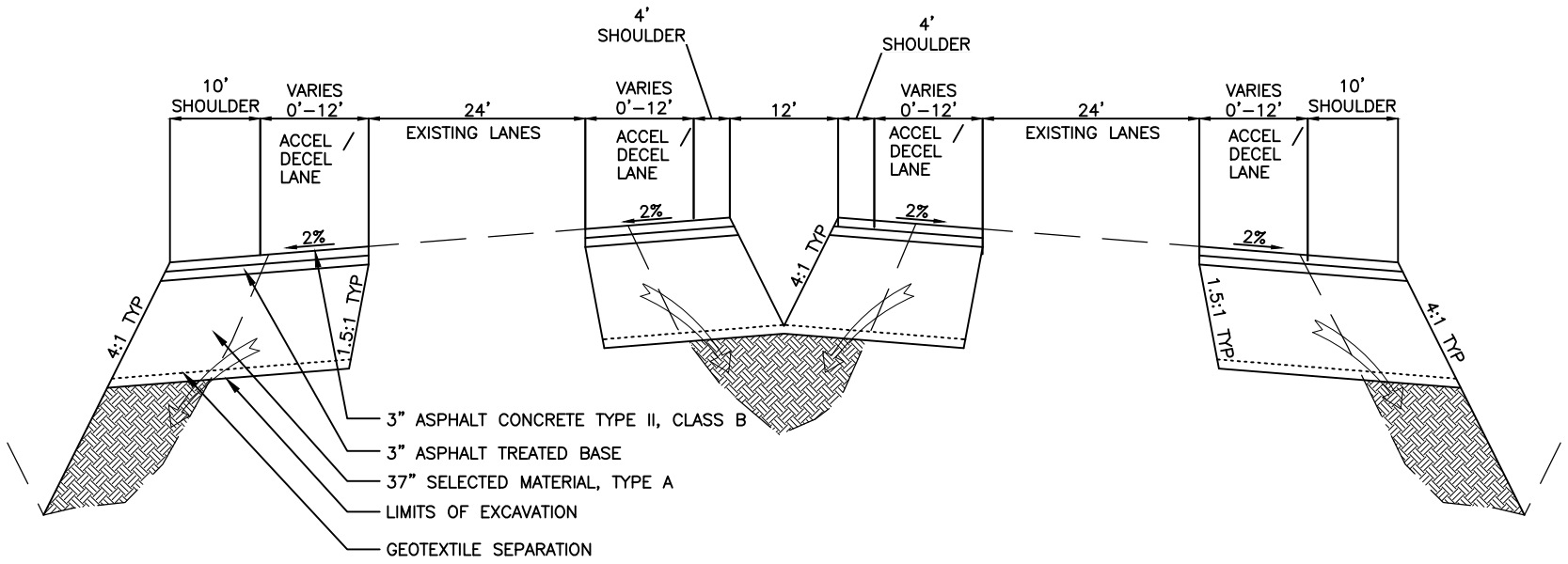
Lane and shoulder widths and cross-slopes on the Richardson Highway will match existing construction. New highway lanes will be 12 feet wide with 10-foot shoulders on the outside and 4-foot shoulders on the median side. Highway lanes and shoulders will have a 2% cross-slope away from the road centerline to match the cross-slope of the existing roadway. The clear zone width will meet the minimum of 30 feet from the edge of traveled way. A swale or ditch and an access control fence will separate the highway from the frontage road, similar to the existing condition. All slopes between road shoulders and ditches will be recoverable. Ditches will be sloped to drain away from both the highway and the frontage road.

For the frontage roads, AASHTO Exhibit 6-5, Minimum Width of Traveled Way and Shoulders, lists the minimum width of travelled way for a 40 mph design speed as 22 feet with 5-foot shoulders. However, a footnote states that shoulder width may be reduced for design speeds greater than 30 mph as long as a minimum roadway width of 30 feet is maintained. The north and south frontage roads will have two 12-foot-wide lanes and 3-foot-wide paved shoulders, for a 30-foot top width. This matches the recently constructed frontage roads at the Badger Road interchange.

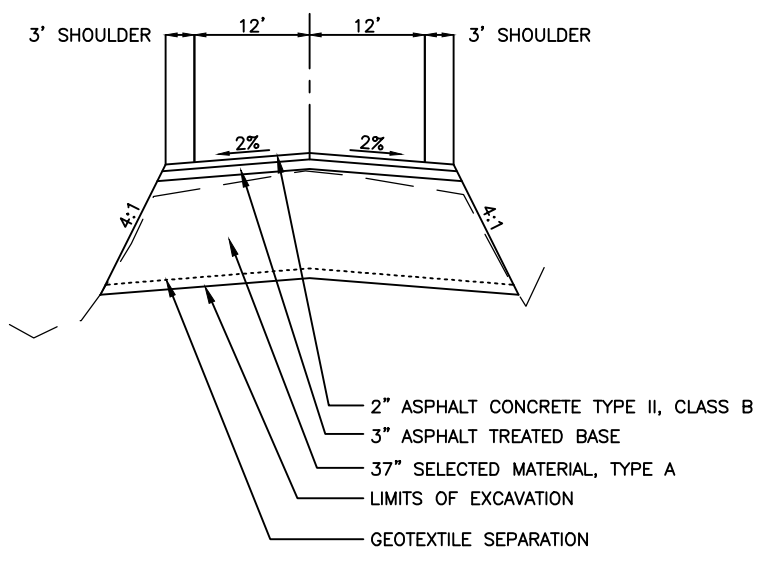
Minor access roads, such as the realigned Old Richardson Highway at Rozak Road and approaches to other public roadways, will have two 12-foot-wide lanes with shoulders sized to match the existing conditions.

A 2-inch layer of asphalt concrete pavement over 3 inches of asphalt-treated base and 37 inches of Select Material Type A will be used for the structural section. Select Material will be used for additional fill material as needed. The pavement section is discussed in detail in Section 20, Pavement Design.

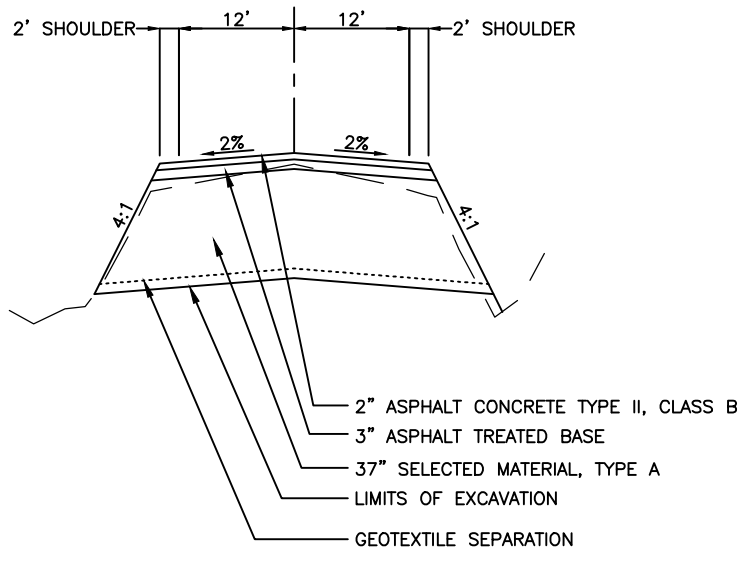
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	1	1



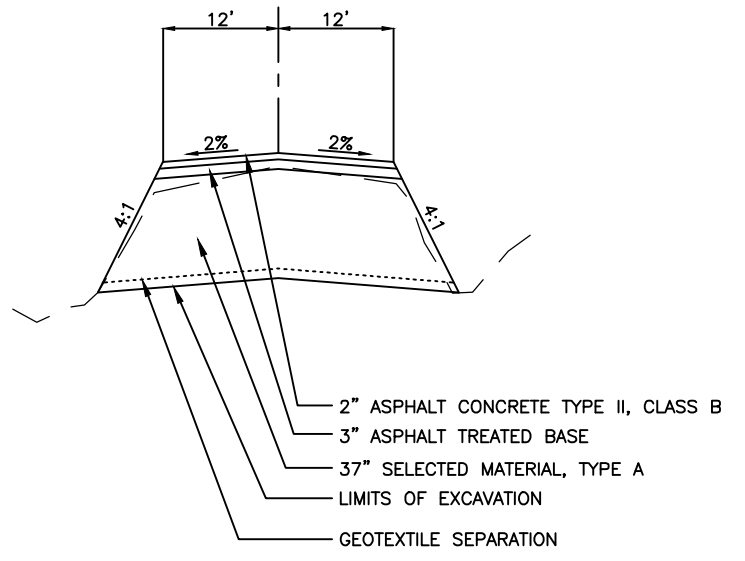
RICHARDSON HIGHWAY AT ACCELERATION / DECELERATION LANES



NORTH & SOUTH FRONTAGE ROAD AND ROZAK ROAD



STREETS



OLD RICHARDSON HIGHWAY CONNECTOR

FIGURE 5
TYPICAL SECTIONS

9 HORIZONTAL/VERTICAL ALIGNMENT

The proposed horizontal alignment generally follows the existing frontage road. New segments use the same general offset between the access control line and the ROW line.

Due to the proximity of the ROW line to the frontage roads, the vertical alignment must closely match the existing in order to keep the improvements within the ROW to the extent practical while maintaining roadside drainage and proper design profiles.

Frontage roads in the project area are essentially straight except at intersections. All vertical and horizontal curves meet the requirements for the 40 mph design speed, with the exception of the curves near the bulb-out intersections, which lead to a stop condition and are designed so that WB-65 trucks can maneuver without encroaching on the opposite lane. Alaska Double trucks can also maneuver through the intersections as long as traffic has cleared so that they can encroach on the opposite lane if needed. Plan and profile sheets in Appendix E show the proposed vertical and horizontal alignments.

10 DRAINAGE

The project area is relatively flat. Historical precipitation is generally low, and existing drainage swales filter runoff. Existing culverts that cross the roadways and their proposed improvements are listed in Table 3. Culverts to be improved will be either extended or replaced based on their condition. New approach culverts will be installed at all of the driveways and realigned street approaches.

Table 3 – Culverts

Milepost	Station	Size (in)	Location	Extend (ft)	Replace (ft)	Notes
356.2	372+78.18	24	LuAnne Road intersection	—	—	No change
356.15	375+54.56	18	South Frontage Road	—	60	Replace culvert
355.7	400+46.67	24	Richardson Hwy. westbound	20	—	Extend south end
355.7	400+62.03	24	Richardson Hwy. eastbound	—	—	No change
355.2	426+99.86	24	Richardson Hwy. westbound	—	—	No change
355.2	427+05.05	24	Richardson Hwy. eastbound	10	—	Extend south end
355.2	427+12.91	18	South Frontage Road	—	60	Extend both ends
355.1	430+69.68	18	South Frontage Road	—	65	Extend both ends
354.95	437+63.73	48	South Frontage Road	30	—	Extend south end
354.95	438+13.26	72x48 multi-plate	Richardson Hwy.	—	—	No change

Milepost	Station	Size (in)	Location	Extend (ft)	Replace (ft)	Notes
354.7	453+00 (700' left)	36 (2 ea.)	Rozak Road	—	60 (2 ea.)	Install new culverts on Rozak Road to maintain drainage after culverts and embankment are removed from the abandoned portion of the Old Richardson Hwy.
354.55	461+31.31	18	Richardson Hwy. westbound	20	—	Extend south end
354.55	461+36.46	18	Richardson Hwy. eastbound	10	—	Extend north end
354.2	483+10.99	72	Richardson Hwy./ South Frontage Road	150	—	Channel B culvert; extend 150 feet to the south
354.2	483+17.42	72	Richardson Hwy./ South Frontage Road	150	—	Channel B culvert; extend 150 feet to the south
354.2	483+24.36	72	Richardson Hwy./ South Frontage Road	150	—	Channel B culvert; extend 150 feet to the south

The Richardson Highway crosses FNSB Flood Control Channel B near Sta. 483+20 of the project. In order to maintain the drainage capacity of Channel B after the south frontage road is extended, it is proposed that the 72-inch diameter culverts located at the crossing be extended by approximately 150 feet to allow the culverts to pass water under both the highway and the frontage road. This will result in a total length of 545 feet for each of the three culverts. PDC performed a hydraulic analysis to determine the impacts of this extension.

The initial sizing of the culverts was controlled by seepage flows coming from the Tanana River, flowing under the flood control dike and percolating up through the ground. These flows are nearly ten times larger than the flows produced by surface runoff and tend to make their way to the ground surface more slowly. Therefore, the flows caused by seepage can be analyzed separately from surface runoff flows.

In 1978, the U.S. Army Corps of Engineers provided the original seepage flow values for the entire length of Channel B. At the intersection of the channel and the highway, the flows for the 25-year, 50-year, and 100-year floods are 275 cfs, 318 cfs and 426 cfs, respectively. These flow values were also used by Michael Baker, Jr., Inc. (2001) during design of the Badger Road interchange.

The existing channel was analyzed in order to determine the normal depth at the 100-year flow. This depth was determined to be 2.74 feet, which results in an average tailwater elevation of 464.7 feet at the downstream end of the culverts. Next, an analysis was done for the 100-year flow at the culvert's existing length and then again at the proposed length. The existing length yielded a computed headwater elevation of 470.16 feet, while the proposed extension yielded a computed headwater elevation of 470.17 feet. In both cases, the maximum headwater elevation remains more than 3 feet below the highway shoulder elevation. The slight (0.01-foot) increase in headwater elevation is insignificant. Furthermore, the Flood Insurance Rate Maps developed by the Federal Emergency Management Agency (0250090203G) indicate that the location of the culverts falls within Zone X, i.e., outside the 500-year flood plain. Therefore, Channel B at this

location does not qualify as an "adopted regulatory floodway" and is not subject to the FNSB "no-rise" policy.

The analysis shows that the increase in length has a negligible effect on the culverts' ability to pass the 100-year design flows. A 150-foot extension of the three culverts would be feasible and is recommended.

11 SOIL CONDITIONS

The historic as-built report was provided by DOT&PF. This file summarizes as-built drawings and geotechnical information from past or nearby projects related to the current project.

In general, borings in the area encountered a shallow organic mat and typically less than 6 feet of silt over sand and gravel. In slough areas the silt may be as much as 12 feet deep.

As-builts for the eastern end of the Badger Road Interchange frontage road showed as much as 4 feet of excavation replaced with Select Material Type B fill, 18 inches of Select Material Type A, 6 inches of aggregate base course, and 2 inches of asphalt concrete, Type I, Class A.

Longitudinal cracking is visible at the intersection of LuAnne Road with the south frontage road.

As-builts for the south frontage road section from Bethany Street east to the end at At Ease Childcare show the current pavement was constructed in 1989 by spreading the roadway, placing a variable amount of Borrow Type A to bring the road to desired subgrade elevation, placing 6 inches of crushed aggregate base course, and then paving with 2 inches of asphalt concrete, Type II. PDC's field investigation found signs of foundation problems in this area. The shoulders have settled, causing longitudinal cracks along long stretches of the roadway. From Midland Street to the east end there is significant and continuous damage to the pavement (alligator cracking, recent patching, and visible settlement).

Drilling will be conducted in the distressed areas along the frontage roads at intervals of approximately 1,000 feet, as was done for the Badger Road Interchange frontage roads. This will equate to about 20 borings. Additional borings will be taken near:

- New intersection locations and undeveloped areas at the bulb-outs
- The pond at the new Midland Street intersection
- Acceleration and deceleration lanes adjacent to distressed frontage road areas
- Channel B culverts

12 EROSION AND SEDIMENT CONTROL

In accordance with the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System General Permit for Alaska, construction activities will require a Storm Water Pollution Prevention Plan (SWPPP). An Erosion and Sediment Control Plan (ESCP) will be provided in the contract plan set. The contractor must submit the SWPPP before construction begins.

The total area of disturbed ground is estimated to be 48 acres. Most of this will be on land already developed through construction of the existing highway or frontage road system or adjacent commercial/light industrial business. New alignments will cause 11 acres of disturbance along:

- 0.9 miles of eastward extension of the south frontage road
- 0.3 miles of eastward extension of the north frontage road
- 0.3 miles of realignment of Rozak Road to connect to the Old Richardson Highway

Culverts will be modified as discussed in the drainage section. In addition, ditches and swales will be modified as needed to ensure positive drainage away from the improved facilities.

Construction features that will require temporary or permanent erosion and sediment control measures include:

- Detours and re-routes
- Staging areas
- Embankment slopes abutting wetlands
- Disturbed areas around culvert inlets and outlets
- Disturbed median ditches draining into culvert inlets
- Disturbed roadside ditches draining from the construction site
- Stockpiles including, topsoil piles, spoil piles, and excess soil piles
- Cut and fill slopes

Best management practices (BMPs) will be implemented during construction to minimize detachment and transport of sediment beyond the construction site. As necessary, in compliance with the Alaska Pollutant Discharge Elimination System General Permit for Construction Activities, the construction contractor will issue a Notice of Intent to the Alaska Department of Environmental Conservation (ADEC) for storm water discharges associated with construction activities and, before construction, a SWPPP will be completed for ADEC review.

13 TRAFFIC ANALYSIS

Kinney Engineering prepared a report (*Richardson Hwy MP 353-357 Access Improvements: Traffic Analysis Report*, November 2012) to document the roadway configuration, annual average daily traffic volumes (AADT), intersection level of service, segment crash rates, and intersection crash rates for existing and proposed roadway configurations. The analysis applied a 2.0% growth rate (as specified in the design designation) to both the mainline Richardson Highway volumes and the side street volumes to predict future AADTs. A brief summary and the key figures from the report are presented below.

13.1 Major Operational Findings

- Left turn movements from the Midland Street and Rozak Road intersections will experience LOS E or F in the design year.
- Mainline Richardson Highway freeway performance was shown to be at LOS A (westbound) and B (eastbound) in the design year.
- Acceleration/deceleration/weaving sections operational performance will be LOS A in the design year.
- An auxiliary lane between the Wescott/LuAnne and Midland intersections is recommended unless the new Midland Street intersection is moved 500 feet to the east.
- The Wescott Garden Lane intersection would need to be shifted 200 feet east to meet AASHTO recommendations for ramp terminal spacing. An auxiliary lane between the intersection acceleration lane and the Badger Road interchange off-ramp is recommended whether or not the intersection is shifted.
- An auxiliary lane from the existing Badger Road interchange on ramp to the LuAnne road deceleration lane is recommended.
- The intersections within the study area are below average or critical crash rate thresholds when compared to similar intersections in the state and will remain so with the consolidated intersection concept.
- Moose/vehicle crash rates are significant along this corridor, particularly during hours of darkness.

13.2 Traffic Volumes

AADT volumes for the years 2000 to 2010 for roadways within the study area are shown in Table 4.

Table 4 – Average Annual Daily Traffic Volumes (2000-2010)

Segment	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Avg. 2000-09
Richardson Hwy. east of Old Rich. Hwy. – Loop A	13,925	15,050	14,500	14,675	14,675	16,785	16,750	19,590	19,230	13,040	13,965	15,822
Old Rich. Hwy. / Badger Loop A, north of Richardson Hwy.	525	525	525	525	700	825	725	750	1,075	605	680	678
Rozak Road south of Richardson Hwy.	125	125	125	100	225	200	145	215	190	135	170	159

Predicted volumes for each leg of the new intersections are shown in Figure 6. These predictions were based on the following:

- The design designation published 2010 AADTs for the Richardson Highway of 14,000 with 12% occurring in the PM peak hour with a directional distribution of 45:55 and 8% heavy vehicles.
- The same AADT was reported for the entire project segment.
- Increases in AADT were projected using a 2% annual growth rate.
- To compute approach volumes for the existing side streets, the 2012 peak hour turning movement counts for the various intersections were combined to account for the proposed reduction in the number of access points to the Richardson Highway.
- Peak hour turning movement volumes (TMV) were converted to AADTs using factors from the permanent traffic recorder station west of the Badger Road interchange, which are published in the 2009 Northern Region traffic volume report.

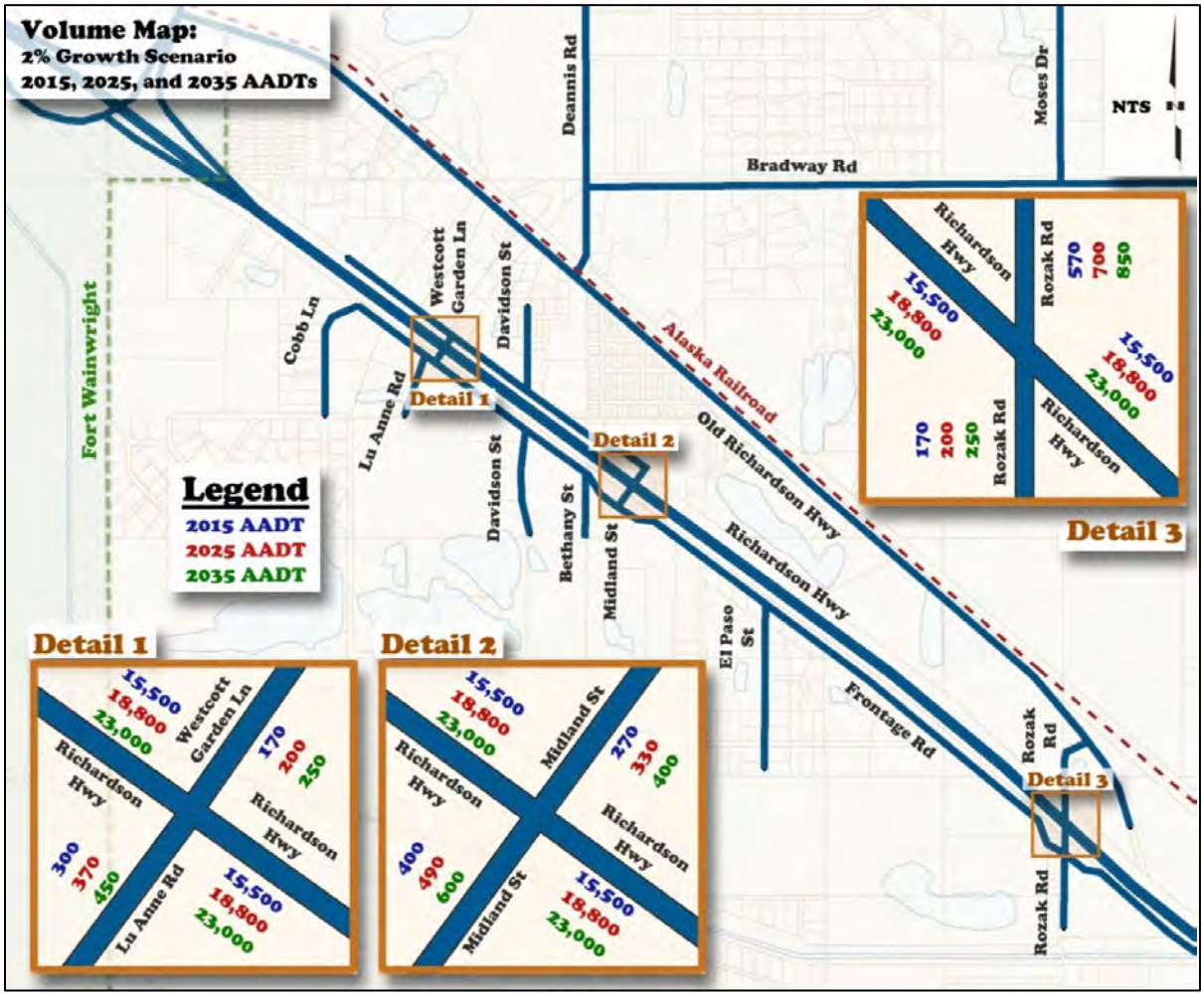


Figure 6 – Traffic Volume Map

13.3 Turning Movements

The turning movement volumes for all traffic, shown in Figure 7, were developed following NCHRP 255 methodology applied to the traffic volumes presented above.

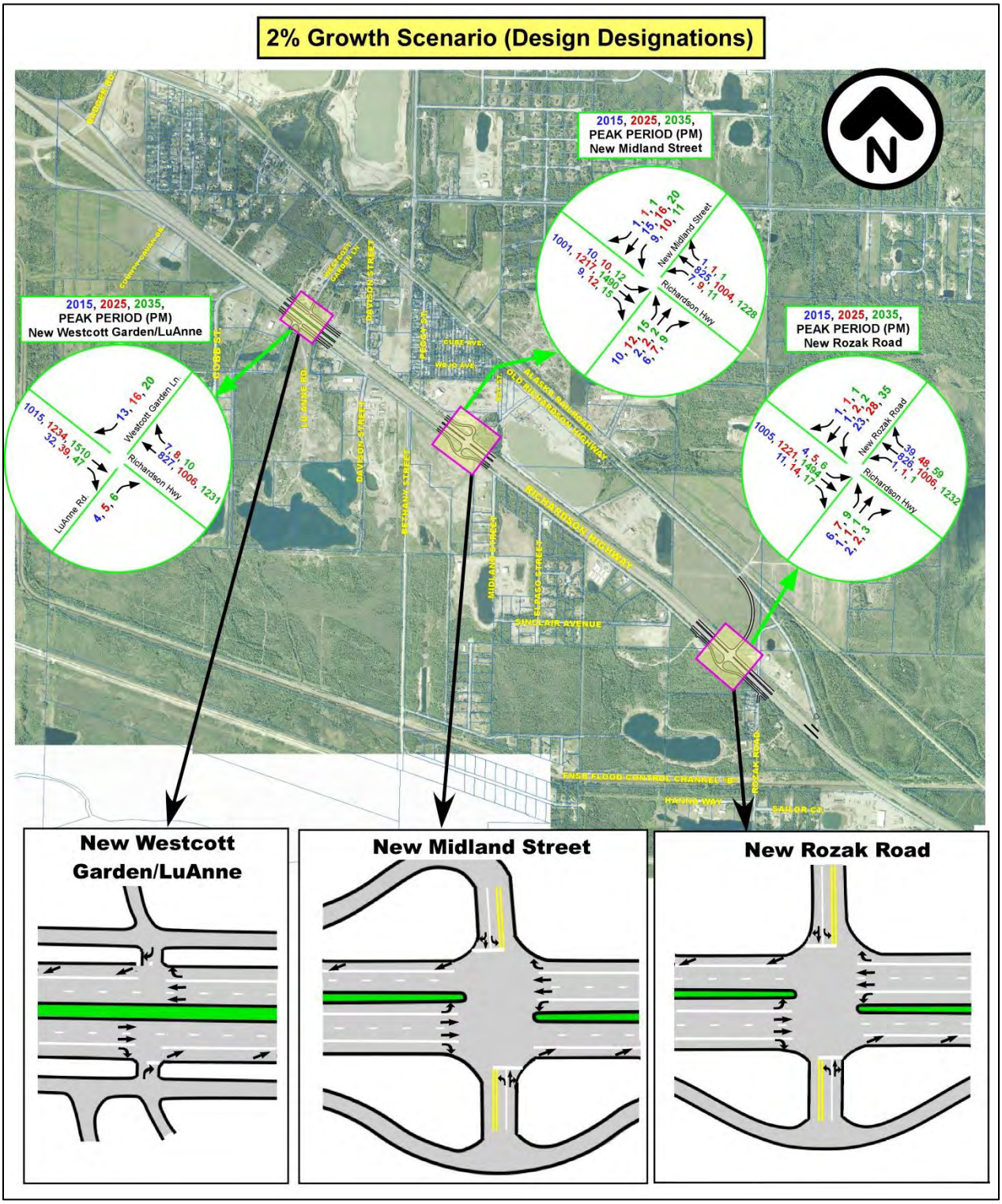


Figure 7 – Turning Movements

13.4 Level of Service

The Richardson Highway between Fairbanks and North Pole has both grade-separated and at-grade intersections. As such, it is not strictly a freeway. However, given the access consolidation, depressed median, relatively low cross-street volumes, and especially the addition of auxiliary deceleration and acceleration lanes similar to freeway ramps at the terminals, within the project area the Richardson Highway is assumed to operate more like a freeway than a multilane highway. Therefore, the mainline highway was evaluated as a freeway segment, with an assumed 75 mph free-flow speed, and the acceleration and right-turn deceleration lanes were evaluated as freeway ramps and weaving sections on a freeway.

The HCM recommends LOS B for all facilities on a freeway in a rural area with level terrain. Evaluation of the Richardson Highway's capacity indicated that performance will be at LOS A for westbound traffic and at LOS B for eastbound traffic (see Table 5). All of the right turn deceleration and acceleration ramps, and weaving segments between ramps if continuous auxiliary lanes are constructed as recommended, will operate at LOS A.

Table 5 – Freeway Segment Level of Service for Richardson Highway MP 353-357

Design Year 2035 2% Growth Rate	Flow Rate (passenger cars/hour/lane)	Density (passenger cars/mile/lane)	Level of Service
Eastbound	1,157	16.5	B
Westbound	529	7.6	A

The proposed at-grade unsignalized intersection configurations were evaluated using HCM 2010 to determine the LOS for the projected TMV scenario for the 2015, 2025, and 2035 peak hours (Figure 7). This methodology applies to movements that are under stop sign control or that must yield to oncoming traffic (such as the left turns from the highway).

In Figure 8, the movements are color-coded to levels of service, with average delay per vehicle in seconds noted nearby. LOS F movements with "over" annotations indicate an overcapacity movement with very long delays.

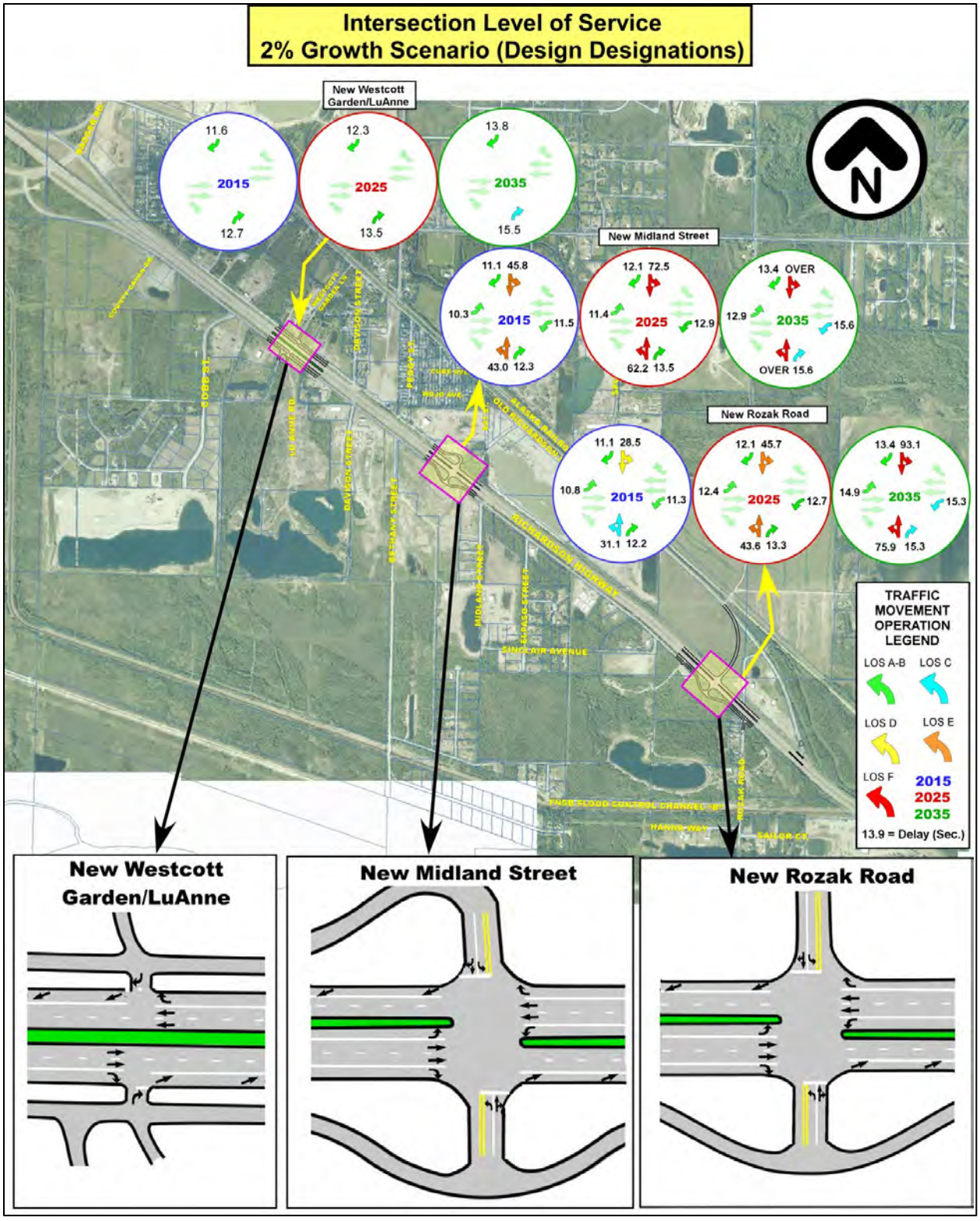


Figure 8 – Levels of Service

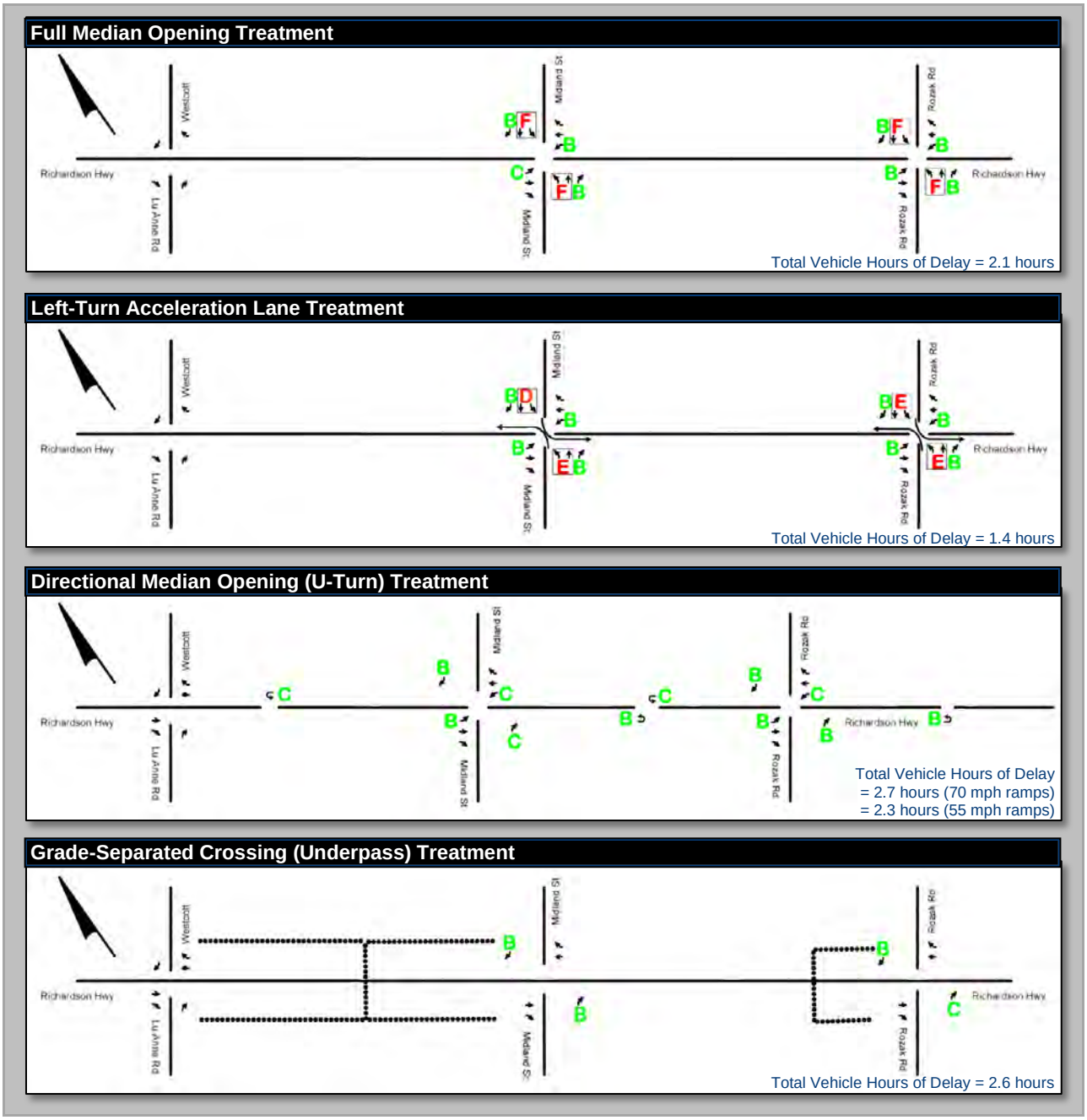


Figure 9 – LOS for Left Turn Movements (2035 PM Peak Hour)

At both the Midland Street and Rozak Road intersections, left turns onto the Richardson Highway from the frontage roads operated at LOS F in the design year (Figure 9, Full Median Opening Treatment). Since these turns had a significantly lower level of service than the other movements, Kinney Engineering performed a study of ways to reduce this delay. Kinney considered the following three alternatives (discussed in Section 3 above):

- Median-side left-turn acceleration lanes, which improved the LOS to D or E
- Median opening U-turns, which improved the LOS to B or C
- Grade-separated crossings, which improved the LOS to B for all intersections

Median-side left-turn acceleration lanes, the preferred alternative, would provide a configuration familiar to drivers at the lowest cost and without any additional ROW. The other alternatives provide more safety benefits, but for the level of traffic projected, the additional cost and ROW requirements were not considered to be justified. All of the median left-turn lanes would operate at LOS B or better.

Intersection turning movement data was obtained in March 2012 before gravel haul and other trucking operations in the vicinity of the project corridor were active for the season. In order to estimate the volume of truck traffic using the existing and proposed consolidated intersections, a questionnaire was sent to the larger gravel haul and trucking firms in the area. The five largest firms responded to the questionnaire. According to the trip information they provided, as many as 16 to 20 more truck trips could occur at each of the new Midland Street and Rozak Road intersections during the peak hour, at least doubling the percentage of trucks at these intersections. However, this increase during the peak hour would not change the LOS rating for either intersection.

13.5 Intersection Crash Predictions

In order to estimate the intersection crash rate for the proposed improvements, the predictive method for rural multilane highways from the 2010 HSM was used. Crash data for existing at-grade intersections on the Richardson Highway between Eielson Air Force Base (beginning of four-lane configuration) and the Badger Road Interchange near Fairbanks were used to calibrate the HSM rural four-lane divided highway safety performance functions for local conditions. Table 6 depicts the results of this analysis.

Table 6 – Historical and Projected Number of Crashes and Crash Rate at Proposed Midland Road and Rozak Street Intersections

Years	Number of Crashes	Crash Rate
2000-2009	33	0.14
2016-2025	22	0.17
2026-2035	28	0.18

Resulting crash numbers and crash rates (crashes per million vehicle miles, or MVM) are predicted to remain below the thresholds for above-average or above-critical crash rates. Also, the projected crash rates are all below 0.23, which is the historic crash rate for similar intersections between Badger Road and Eielson Air Force Base from 2000 to 2009.

14 SAFETY IMPROVEMENTS

Evaluation of 2000-2009 crash data reveals that intersections within the study area are below average or critical crash rate thresholds when compared to similar intersections in the state and will remain so with the proposed consolidated intersection concept.

The following features will increase the level of safety in the project area:

- **Consolidating access points.** This will reduce the number of crossing maneuvers and allow drivers more time between intersections to adjust to other traffic, thereby reducing the likelihood and severity of crashes.

- **Adding acceleration and deceleration lanes** will give drivers more time to adjust their speed when entering or exiting the highway and reduce conflicts with through traffic.
- **Connecting the south frontage road from the Badger Road interchange to the Black Gold Express/Hamilton Construction access point.** This gives all traffic on the south frontage road the option of using the interchange instead of turning left onto the Richardson Highway.
- **Adding highway lighting at the intersections and acceleration/deceleration lanes** will improve visibility at night and should reduce nighttime crashes involving moose.

15 ACCESS CONTROL FEATURES

Richardson Highway is a partial-access-controlled facility. The ROW plans show the legal access points. This project will modify the breaks in the access control line; these modifications will be made in consultation with FHWA and documented in the final ROW mapping process.

This project will close access points at Davison Street, at the eastern end of the existing south frontage road (At Ease Childcare), and at the Old Richardson Highway. The access control fence will be extended at the closed intersections. The access points at Midland and Rozak will be revised for the new intersection layout.

The frontage roads are common-access-controlled through the DOT&PF driveway permit process.

16 PEDESTRIAN/BICYCLE (ADA) PROVISIONS

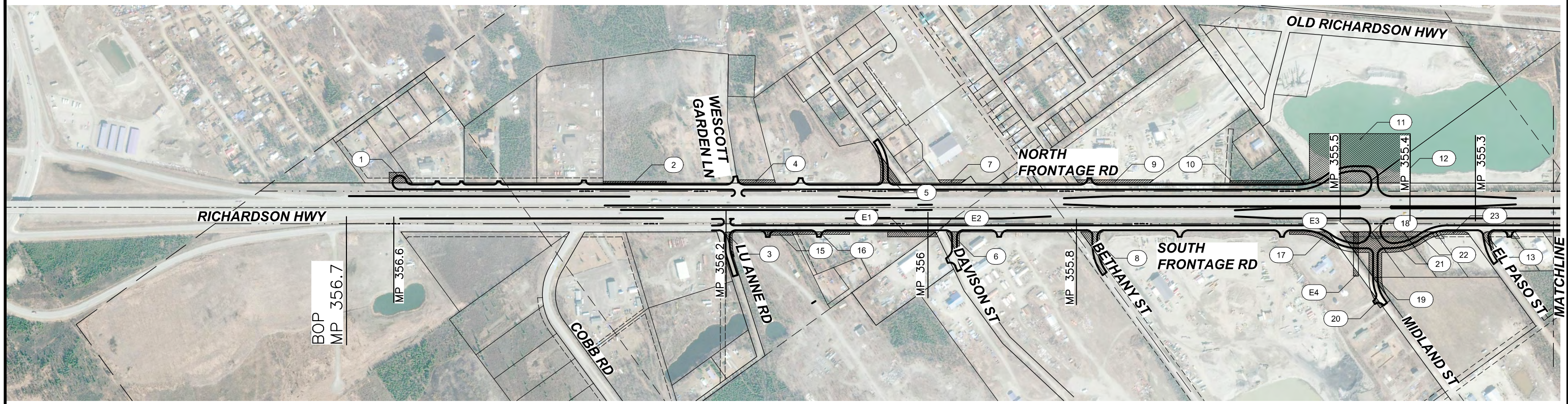
There are no proposed dedicated pedestrian, bicycle, or ADA features. The shoulders of the Richardson Highway will accommodate pedestrians and bicycles, and that use is not precluded within the project limits. The widened frontage roads with shoulders will be a shared use facility for the pedestrians and bicycles. The extension of the frontage road on the south will allow bicycles and pedestrians to travel west to the Badger Overpass in order to get to the north side of the Richardson Highway.

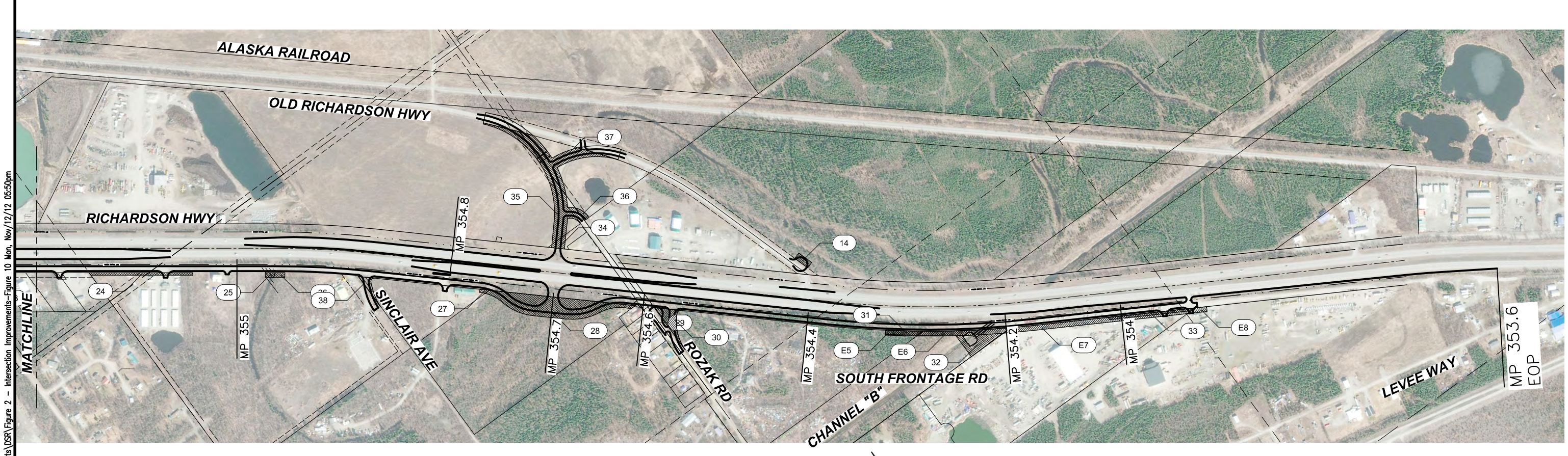
17 INTELLIGENT TRANSPORTATION SYSTEM REQUIREMENTS (N/A)

18 RIGHT-OF-WAY REQUIREMENTS

The proposed project improvements may require acquisition of property or utility easements on parts of approximately 40 parcels. Most are minor partial acquisitions where the limits of construction encroach on the adjacent property, and further refinement of the design may allow a few of these to be eliminated completely. However, the realignments of Midland Street and Rozak Road will require large pieces of several parcels; the ROW appraisal and negotiation process will determine whether acquisition of these parcels is full or partial. The proposed ROW acquisition is shown in Table 7 and Figure 10 and on the preliminary plan and profile sheets in Appendix E.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	1	1





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SCALE IN FEET

FIGURE 10
PROPOSED ROW ACQUISITION

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Table 7 – Right-of-Way Impacts

No.	Approx. Station	Parcel Owner	Legal Description	Purpose for Acquisition	Estimated Acreage
Along Richardson Highway					
1	352+00 L	Muriel E. & Dale E. Denny	Tract 1	Turnaround at beginning of north frontage road	0.175
2	365+00 L	Matt T. Shawcroft & Derek R. Averett	Tract A	Extents of work impact property*	0.089
3	372+00 R	Berta & Herman Walsky	PLAT 2007-161	LuAnne Road realignment	0.070
4	374+00 L	Richard Van Hatten	TL 2850	Extents of work impact property*	0.106
5	382+00 L	Alaska Contracting & Consulting Inc. & Richard Van Hatten	TL 2828 Parcel II	Davison St. realignment	0.257
6	386+00 R	Mid City Enterprises, LLC	TL 2800	Davison St. realignment	0.159
7	386+00 L	Mark G Backes	PLAT 2010-134	Extents of work impact property*	0.068
8	394+50 R	Alaska Industrial LLC	PLAT 2004-27	Bethany St. realignment	0.232
9	395+00 L	Colaska, Inc.	TL 2749 Parcel IV	Extents of work impact property*	0.209
10	403+00 L	Colaska, Inc.	TL 2701	Extents of work impact property*	0.155
11	411+00 L	Pattinson Subdivision PLAT 190.812	Lot 2 Block 1	Extension of north frontage road	3.759
12	412+00 L	Colaska, Inc.	TL 2703	Extension of north frontage road	0.581
13	418+50 R	John Clifford & Justin Robert Cowles	Lot 1	El Paso St. realignment	0.088
14	470+00 L	Henry & Janice D. Dosch	TL3504	Turnaround at end of Old Rich Hwy.	0.092
15	375+00 R	Walsky Property	PLAT 2007-161	Extents of work impact property*	0.071
16	378+00 R	Bruce M. Osborne	TL 2843	Extents of work impact property*	0.121
E1	383+00 R	Bruce M. Osborne	TL 2843	30-foot PUE for utility pole relocation	0.188
E2	384+00	Teslin Capital, LLC & Finn-AL Crafts Construction, LLC	TL 2806	30-foot PUE for utility pole relocation	0.019
17	408+00 R	Arvil A. Still	PLAT 2007-90	Extension of south frontage road	0.212
E3	410+70 R	Linda F. & Arvil A. Still	Lot 1	30-foot PUE for utility pole relocation	0.090
E4	410+70 R	Arvil A. Still	PLAT 2007-90	30-foot PUE for utility pole relocation	0.025
18	412+00 R	Linda F. & Arvil A. Still	Lot 1	Midland St. realignment	0.823
19	412+00 R	Badger Industrial Park	PLAT 2006-176	Midland St. realignment	0.053
20	412+00 R	Arvil A. Still	PLAT 2007-90	Midland St. realignment	0.036
21	413+00 R		Lot 2	Extension of south frontage road	0.521
22	415+00 R	Lee K. Drotzur	Lot 3	Extension of south frontage road	0.250
23	416+00 R		Lot 4	Extension of south frontage road	0.071
24	429+00 R	CGH Holdings Inc.	Lot 1	Extents of work impact property*	0.217
25	437+00 R	Bette A. Watts	Lot 2B	Extents of work impact property*	0.039
26	438+00 R	David Flenaugh	Lot 3	Extents of work impact property*	0.044
27	450+00 R	Stephanie Williams	TL 3427	Extension of south frontage road	0.023
28	455+00 R	Thomas W. Maher Living Trust	TL 3410	Extension of south frontage road	1.805
29	460+00 R	Calvin C. & Cindy F. Stageman	TL3408	Extents of work impact property*	0.015
30	461+50 R	Robert M. Schmit	TL 3515	Rozak Road realignment (South)	0.289
E5	476+00 R	Robert M. Schmit	TL 3515	30-foot PUE for utility pole relocation	0.145
31	476+00 R	Robert M. Schmit	TL 3515	Extents of work impact property*	0.123
E6	479+00 R	Chena Lakes Drainage Channel	TL 3513	30-foot PUE for utility pole relocation	0.369
32	479+00 R	Chena Lakes Drainage Channel	TL 3513	Extents of work impact property*	0.779
E7	487+00 R	Leslie J. & James A. Huffman	Tract A	30-foot PUE for utility pole relocation	0.781
33	490+00 R	Leslie J. & James A. Huffman	Tract A	Extents of work impact property*	0.179
E8	494+00 R	Hamilton Construction	Lot 3500	30-foot PUE for utility pole relocation	0.066
38	441+00 R	Stephanie Williams	TL 3427	Sinclair Ave. realignment	0.114
Along Rozak Road					
34	11+00		TL 3419	Rozak Rd. realignment	0.101
35	9+00	Tin Cup, LLC	TL 2700	Rozak Rd. realignment	1.044
36	9+00	Rivers Wood Products, LLC	TL3519	Rozak Rd. realignment	0.044
37	6+00	Rivers Wood Products, LLC	TL 3519	Old Rich Hwy. realignment	0.886
				TOTAL ROW ACQUISITION	**15.469**

*Embankment encroaches over the ROW line, so acquisition of a linear strip of the property is anticipated.

19 UTILITY RELOCATION AND COORDINATION

Numerous utilities cross and parallel the Richardson Highway and frontage roads within the project corridor:

- Alaska Communications Systems (ACS): Telephone and fiber optic lines
- AT&T/Alascom (AT&T): Telephone and fiber optic lines
- General Communications Inc. (GCI): Fiber optic and cable TV lines
- Golden Valley Electric Association (GVEA): Electric power lines

The locations of these utilities are shown on the utility conflicts sheets in Appendix E. Potential crossing locations are tabulated below.

Table 8 – Utilities

Station	OH	UG	Type	Description
ACS				
354+22 LT		X	Communications cable	Runs under proposed driveway
358+01		X	Communications cable	Runs under proposed driveway
359+89 LT - 371+60 LT		X	Communications cable	Runs parallel to Richardson Hwy. beneath the proposed north frontage road.
372+06		X	Communications cable	Crosses under the Richardson Hwy. and the proposed north frontage road.
395+42		X	Communications cable	Crosses under the proposed south frontage road, the Richardson Hwy., and the north frontage road
402+65		X	Communications cable	Crosses under the proposed south frontage road, the Richardson Hwy., and the north frontage road
409+56 RT - 414+37 RT		X	Communications cable	Runs parallel to Richardson Hwy. beneath the proposed south frontage road.
418+34 RT		X	Communications cable	Runs under a proposed driveway
424+97		X	Communications cable	Crosses under the proposed south frontage road and the Richardson Hwy.
430+72 RT		X	Communications cable	Runs under a proposed driveway
434+43 RT		X	Communications cable	Runs under a proposed driveway
450+56		X	Communications cable	Two lines cross under the proposed south frontage road and Richardson Hwy.
453+18 LT		X	Communications cable	Two lines cross under the proposed Rozak Road realignment
454+30		X	Communications cable	Two lines cross under the proposed Rozak Road realignment
458+45		X	Communications cable	Crosses under the proposed south frontage road and the Richardson Hwy.

Station	OH	UG	Type	Description
AT&T				
450+96		X	Fiber optic cable	Crosses under proposed Rozak Road realignment
456+54		X	Fiber optic cable	Runs under a side road involved in the proposed Rozak Road realignment
GCI				
452+73 LT		X	Fiber optic cable	Runs under proposed Rozak Road realignment
454+37		X	Fiber optic cable	Runs under Old Richardson Hwy. and proposed Rozak Road realignment
GVEA				
349+69 LT	X		Electric power line	Utility pole conflicts with north frontage road
371+90 LT	X		Electric power line	Multiple utility poles may conflict with proposed north frontage road
384+65 RT	X		Electric power line	Utility pole may conflict with proposed south frontage road
395+73 LT	X		Electric power line	Utility pole may conflict with proposed north frontage road
408+85 RT	X		Electric power line	Two utility poles conflict with south frontage road
474+47 RT	X		Electric power line	Electric lines in DOT&PF survey do not match up with Google Earth street view. Survey may be outdated.
482+98 RT	X		Electric power line	Electric line location approximated from GVEA graphic
485+19 RT	X		Electric power line	Utility pole may conflict with proposed south frontage road. Not confirmed.
489+82 RT	X		Electric power line	Utility pole may conflict with proposed south frontage road. Not confirmed.

It is likely that all relocations will be completed in advance of construction by the utilities involved. DOT&PF's construction contractor may be asked to complete some underground relocations during project construction.

20 PAVEMENT DESIGN

The selected pavement design was approved by the DOT&PF Regional Materials Engineer and generated using the AKFPD and associated software. The pavement design was analyzed using the mechanistic design method. Design calculations and design approval are documented in Appendix D (pending). The design life of the pavement is 15 years. This section does not include a base course. Special provision H4 will be used to limit oversize material within the top layer of Select A and facilitate grading during construction.

Reconstruction of the full pavement structural section will be re-evaluated after drilling if in-situ soils are deemed suitable/economical for incorporation into the proposed embankment. Modification of pavement design will be based on the pending geotechnical report and recommendations from the DOT&PF Materials Section.

Table 9 – Pavement Section

Course	Minimum Thickness	Material Recommendation
Surface	2 inches	Asphalt concrete pavement
Base	3 inches	Asphalt-treated base
Subbase	37 inches	DOT&PF Selected Material Type A Maximum particle size of 3 inches in the top 8 inches, compacted to 95% of the maximum density with moisture control determined by AASHTO T180

21 BRIDGE IMPROVEMENTS (N/A)

There are no bridges within the project corridor.

22 MAINTENANCE CONSIDERATIONS

DOT&PF owns and maintains the Richardson Highway and the frontage road on the south side of the highway. The frontage road on the north side, which consists mainly of access to commercial properties constructed by the landowners, is not maintained by DOT&PF.

After construction of this project, DOT&PF will assume maintenance of all the facilities. DOT&PF will also absorb the costs of new lighting and snow removal for the additional acceleration/deceleration lanes and the extensions of the frontage roads. Overall cost of pavement maintenance for the frontage roads will decrease for the first few years following the reconstruction, as improving the pavement structural section will reduce the need for patching.

23 MATERIAL SOURCES

All material sources will be contractor-furnished. Materials of appropriate quality are available in sufficient quantity from private and commercial sources in the project vicinity.

24 ENVIRONMENTAL COMMITMENTS

The project's environmental document was approved in July 2009. A written re-evaluation is in progress. The following environmental commitments were documented in the Categorical Exclusion:

- All necessary federal, state, and local permits shall be acquired.
- Efforts will be made to minimize impacts to nesting birds by timing potential habitat-disturbing activities such as clearing and grubbing activities outside of the migratory bird timing window.
- If DOT&PF staff or the Contractor discovers a raptor nest within one-quarter mile of the project, disturbing activities should be avoided within the one-quarter mile area between April 15 and August 1 of any given construction year, or else the U.S. Fish and Wildlife Service should be contacted to refine or waive the timing window.
- An ESCP and a SWPPP will be in place prior to construction.

- If cultural remains are encountered during construction, work in the immediate area must cease and federal regulations pertaining to emergency discovery situations must be followed.

The 2009 Categorical Exclusion checklist can be found in Appendix C. In the reevaluation process, the environmental commitments will be reviewed with respect to the design changes and modified as necessary.

25 DESIGN EXCEPTIONS

A waiver from the standard in PCM Section 1000.1 that adopts the Transportation Research Board's 2000 Highway Capacity Manual (HCM) as policy has been requested. (See Appendix F.) As an alternative, the waiver request asks permission to use the most current (2010) version of the HCM as the adopted standard for traffic analysis on this project.

26 COST ESTIMATE

Estimated project construction costs are shown in the table below. See Appendix A for the preliminary construction cost estimate.

Table 10 – Total Project Cost Estimate

Phase 2: Design	$ 1,788,000
Phase 3: Right-of-Way	$ 1,055,000
Phase 7: Utilities:	$ 500,000
Phase 4: Construction	$17,500,000
Total Project Cost	**$20,843,000**

APPENDIX A

PRELIMINARY COST ESTIMATE

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Northern Region	Richardson Hwy Mp 353-357 Access Improvements Preliminary Estimate for DSR AKSAS No.: 66148 Federal No.: HRO-OA2-4(19) Version ID: 38597 Printed: 12/20/2012 11:39:59 AM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
201 (1B)	Clearing	All required	Lump Sum	85,000.00	85,000.00
201 (2B)	Grubbing	All required	Lump Sum	161,000.00	161,000.00
202 (1)	Removal Of Structures And Obstructions	All required	Lump Sum	60,000.00	60,000.00
202 (2)	Removal Of Pavement	59,500	Square Yard	5.00	297,500.00
202(10)	Single Mail Box Installation	56	Each	250.00	14,000.00
203 (3A)	Unclassified Excavation	130,000	Cubic Yard	8.00	1,040,000.00
203 (6)	Borrow	420,000	Ton	10.00	4,200,000.00
306 (1)	Asphalt Treated Base	21,300	Ton	45.00	958,500.00
306 (2)	Asphalt Cement, Grade 52-28	1,065	Ton	800.00	852,000.00
401 (1)	Asphalt Concrete, Type II; Class B	14,200	Ton	55.00	781,000.00
401 (2)	Asphalt Cement, Grade 52-28	852	Ton	800.00	681,600.00
401 (6)	Asphalt Price Adjustment	All required	Contingent Sum	73,130.00	73,130.00
401 (10)	Asphalt Material Price Adjustment	All required	Contingent Sum	47,206.00	47,206.00
602 (5)	Deadman	1	Each	60,000.00	60,000.00
603 (1-18)	18 Inch CSP	1,165	Linear Foot	60.00	69,900.00
603 (1-24)	24 Inch CSP	730	Linear Foot	90.00	65,700.00
603 (1-36)	36 Inch CSP	120	Linear Foot	150.00	18,000.00
603 (1-48)	48 Inch CSP	30	Linear Foot	200.00	6,000.00
603 (1-72)	72 Inch CSP	450	Linear Foot	350.00	157,500.00
607 (3)	Chain Link Fence	4,200	Linear Foot	30.00	126,000.00
611 (2A)	Riprap, Class I	1,471	Ton	75.00	110,325.00
613 (2)	Culvert Marker Post	14	Each	100.00	1,400.00

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Northern Region	Richardson Hwy Mp 353-357 Access Improvements Preliminary Estimate for DSR AKSAS No.: 66148 Federal No.: HRO-OA2-4(19) Version ID: 38597 Printed: 12/20/2012 11:39:59 AM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
615 (1)	Standard Sign	1,000	Square Foot	85.00	85,000.00
616 (2)	1/2 Inch Diameter Thaw Pipe	4	Each	2,500.00	10,000.00
618 (2)	Seeding	250	Pound	60.00	15,000.00
630 (1)	Geotextile, Separation	117,000	Square Yard	2.00	234,000.00
631 (2)	Geotextile, Erosion Control, Class 1	633	Square Yard	2.00	1,266.00
639 (1)	Residence Driveway	6	Each	800.00	4,800.00
639 (2)	Commercial Driveway	17	Each	1,200.00	20,400.00
640 (1)	Mobilization And Demobilization	All required	Lump Sum	350,000.00	350,000.00
641 (1)	Erosion, Sediment and Pollution Control Administration	All required	Lump Sum	20,000.00	20,000.00
641 (3)	Temporary Erosion, Sediment and Pollution Control	All required	Lump Sum	20,000.00	20,000.00
641 (4)	Temporary Erosion, Sediment and Pollution Control Additives	All required	Contingent Sum	5,000.00	5,000.00
641 (5)	Erosion, Sediment and Pollution Control by Directive	All required	Contingent Sum	10,000.00	10,000.00
641 (7)	SWPPP Manager	All required	Lump Sum	20,000.00	20,000.00
642 (1)	Construction Surveying	All required	Lump Sum	250,000.00	250,000.00
642 (3A)	Three Person Survey Party	All required	Contingent Sum	60,000.00	60,000.00
643 (2)	Traffic Maintenance	All required	Lump Sum	100,000.00	100,000.00
643 (23)	Traffic Price Adjustment	All required	Contingent Sum	0.00	0.00
643 (25)	Traffic Control	All required	Contingent Sum	300,000.00	300,000.00
644 (1)	Field Office	All required	Lump Sum	20,000.00	20,000.00
644 (2)	Field Laboratory	All required	Lump Sum	10,000.00	10,000.00
644 (6)	Vehicles	All required	Lump Sum	50,000.00	50,000.00
644 (15)	Nuclear Testing Equipment Shed	1	Each	5,000.00	5,000.00
645 (1)	Training Program, 3 Trainees/Apprentices	1,500	Labor Hour	1.00	1,500.00
646 (1)	CPM Scheduling	All required	Lump Sum	5,000.00	5,000.00

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Northern Region	Richardson Hwy Mp 353-357 Access Improvements Preliminary Estimate for DSR AKSAS No.: 66148 Federal No.: HRO-OA2-4(19) Version ID: 38597 Printed: 12/20/2012 11:39:59 AM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
660 (3)	Highway Lighting System Complete	1	Each	2,780,000.00	2,780,000.00
661 (2)	Load Center, Type 1A	4	Each	7,500.00	30,000.00
670 (10)	Methyl Methacrylate Pavement Markings	All required	Lump Sum	267,000.00	267,000.00
PROJECT Summary	Pay Items:	49 Items		Subtotal:	14,539,727.00
	Construction Engineering (Percentage)	15%		CENG	2,180,959.05
				Subtotal	16,720,686.05
	Indirect Cost Allocation Plan (ICAP)	4.79%			800,920.86
	TOTAL PARTICIPATING				17,521,606.91
	ADDED COSTS (Not part of the Contract)				
	PROJECT TOTAL				17,521,606.91

APPENDIX B

DESIGN CRITERIA

Design Designation

Design Criteria: Richardson Highway

Design Criteria: Frontage Roads

Accident Data (2005-2009)

Design Designation

MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities

TO: Janet Brown, P.E.,
Preconstruction Engineer
Design/Engineering

DATE: December 9, 2011

FILE NO: I:\Traffic Data\DESIGN\10\RichHwy_66148.doc

TELEPHONE NO: 451-5150

FROM: Ethan Birkholz
Chief, Planning and Support
Northern Region

SUBJECT: Richardson Hwy MP 353-357 Access Improvements Project No. HRO-0A2-4(19)/66148 Design Designation

Please approve the attached design designation by signing the endorsement below which enables your staff to proceed.

Intersecting roads in the project area with available ADT's are included in this package. Those roads include Rozak, and both Old Richardson Hwy access points (near Hawks Greenhouse and Rivers Wood Products).

Any questions should be directed to Jennifer Eason at 451-2257.

Janet Brown 12/27/11

Janet Brown, P.E., Preconstruction Engineer — Date

JCE/sgv

cc: Sarah Schacher, P.E., Engineering Manager, Northern Region

Attachment

Please circulate and return to Traffic Data & Forecasting Manager	
Planning Manager	MLC
Planning Chief	
FMATS **urban only**	MLC
Traffic & Safety	PLG
Any changes, additions, or questions, Please write on this sheet	

DESIGN DESIGNATION

Northern Region Planning

Traffic Data & Forecasting

ROUTE NAME: Richardson Highway
STATE ROUTE NO: 190000
CDS MILEAGE: 353-357
FUNCTIONAL CLASS: Urban Interstate

	YEAR	ADT	%	
ADT	2010	14000		
	2025	18800		
	2035	23000		
DHV	2025	2260	12%	
	2035	2750		
D				45-55
T			**8%**	**Total**
			5.5	Class 5
			0.8	Class 6
			0.3	Class 8
			0.6	Class 9
			0.5	Class 10
			0.3	Class 13
ESAL'S (Design Lane)	To Be Provided by Design			

MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities
Northern Region Preconstruction

TO: Ethan Birkholz
Planning Chief
Northern Region

DATE: November 22, 2011

FILE NO: V:\Hwy\66148 Rich Hwy Access Improvements\08 - Support\01 – Planning\Design Designation Request.doc

THRU: Janet Brown, P.E.
Preconstruction Engineer
Northern Region

TELEPHONE NO: 451-5361
FAX NUMBER: 451-5126

FROM: Sarah Schacher, P.E.
Engineering Manager
Northern Region

SUBJECT: Richardson Hwy MP 353-357
Access Improvements
Project No.HRO-0A2-4(19))/ 66148
Design Designation

Please provide a Design Designation for the **Richardson Hwy MP 353-357 Access Improvements.**

- ☒ Present AADT
- ☒ Design Year AADT (**2035**)
- ☒ Mid-Design Period AADT (**2025**)
- ☒ Design Hourly Volume
- ☒ Directional Split
- ☒ Percent Trucks
- ☒ Design Functional Classification
- ☐ Intersection Turning Movement Counts at (**Turning movement for access points may be requested at a later date.)**
- ☐ Other

The project is scheduled for construction in FY **2015.**This project proposes to improve safety, capacity and level of traffic service, through the establishment of dedicated and improved access points within the project corridor. Existing low volume access points will be eliminated, and frontage road system will be extended.

Please complete the attached Traffic Date Request Form.

Attachment: As stated

GAT/smb

Traffic Date Request Form

TDR Form-1-10/20/03

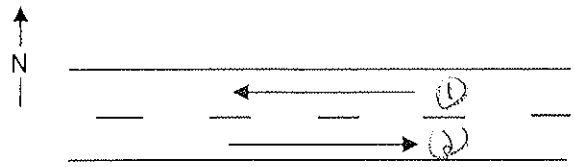
Alaska Department of Transportation & Public Facilities

Requested By:	Design Project Number:	Date Requested:
Garrett Thatcher	HRO-OA2-4(19)	11/21/2011

Base Year: 2012 Base Year Total AADT: 14000 AADT Growth Rate Forward (%/yr): 2.0 End Year: 2035 Back Forcast (%/yr): Begin Year:	Common Route Name: Richardson Highway Functional Class: Urban/Rural (Interstate) Historic M.P. Interval: 353 to 357	CDS Route Name: 190000 CDS M.P. Interval: 355.874 to 360.378

Truck Category	Load Factor (ESALs per Truck)	% of Total AADT in Truck Category
2-axle		
3-axle	See	
4-axle	attached	
5-axle		
≥6-axle		

Lane Configuration Sketch:
(Designer:Provide sketch of lane layout. Number Each lane and show directions.)



Percent of Base Year Total AADT for Each Numbered Lane in Configuration Sketch:	
Lane # 1	% 45
Lane # 2	% 55
Lane #	%
Lane #	%
Lane #	%
Lane #	%

Comments:

Data Provided By:	Providers Signature:	Date Provided:
Scott Yackel		11/30/11

Figure 6-1. Traffic Data Request (TDR) Form

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES

Computations

For Richardson Hwy MP 353-357 Access Improvements

Item No. _____
DATE 11/28/11
Project No. 66148
Project Name Rich Access Improv.
Calc. by Scott
Checked by _____

Year	ADT	
2010	14000	ADT from coverage count on Rich Hwy East of Badger
2025	18800	Loop 5 Mile.
2035	23000	2.0% growth rate used per traffic patterns pas previous design designations in the areas

15yr factor: 1.34
25 yr factor: 1.64

DHV - 12%
2025: 2260
2035 2750

Directional Split: 45-55

% Trucks: 8 Obtained from 2010 Moose Creek permanent site.

Class	# Axles	%	Load Factor
5	2	5.5	0.50
6	3	0.8	0.85
7	4	/	/
8	4	0.3	1.20
9	5	0.6	1.55
10	6	0.5	2.24
11	6	/	/
12	6	/	/
13	7+	0.3	2.24

Intersecting roads 2010 ADT's

	ADT
Old Rich @ Rivers Wood	675
Old Rich @ Hawkes Greenhouse	2500
Kozak Rd	170

Highway Log Report

CDS Route: 190000 Richardson Highway (Internal Dup # 0)

Milepoint: 350.000 **to** 362.327

General Direction: West

Features Selected:

Cross Streets | Mileposts | Bridges/Culverts | Railroads Crossings | Buildings/Landmarks

Attributes Selected

Functional Classification: Urban Interstate

Milepoint	Side	Feature CDS	Feature
350.003	Left	188650	Laurance Road
350.003	Right	188650	Laurance Road
350.271	Right	-	Milepost 347
350.388	-	-	Road Continues
351.060	Left	188872	Saint Nicholas Drive
351.060	Right	188870	Dawson Road (St Nicholas)
351.111	Right	-	No Pole City Limits Sign
351.277	Right	-	Milepost 348
351.934	Left	188855	5th Avenue (E of Old Rich)
351.934	Right	188865	Mission Road
352.431	Right	180010	Richardson WB - Badger Off Ramp (Np)
352.431	Right	-	Milepost 349
352.450	Right	180009	Santa Claus Ln - Rich Hwy EB Rmp
352.455	-	-	Road Continues
352.696	Ahead	-	Badger Loop Rd UC Br# 1767 Begin Deck
352.704	Under	-	Badger Loop Road
352.720	Behind	-	Badger Loop UC 1767 End Deck
352.785	-	-	Road Continues
352.914	-	-	Road Continues
352.916	Left	180008	Rich EB - Santa Claus Ln Rmp
352.926	Right	180011	Badger - Rich WB on Ramp (Np)

Highway Log Report

CDS Route: 190000 Richardson Highway (Internal Dup # 0)

Milepoint: 350.000 **to** 362.327

General Direction: West

Features Selected:

 Cross Streets  Mileposts  Bridges/Culverts  Railroads Crossings  Buildings/Landmarks

Milepoint	Side	Feature CDS	Feature
353.451	Right	-	Milepost 350
353.588	Left	188880	Peridot Street
353.588	Right	188880	Peridot Street
353.838	Left	-	No Pole City Limits Sign
353.931	Both	-	Alaska Railroad
354.356	Right	-	Milepost 351
354.418	Left	188200	Old Rich @ North Pole
354.654	Left	-	Keeney Road
355.089	Both	-	Unknown Named Road
355.359	Right	-	Milepost 352
355.874	Left	-	Frontage Road Access
356.328	Right	-	Milepost 353
356.686	-	-	Road Continues
356.686	Left	-	Levee Way
356.686	Right	-	Rentals Street
357.334	Right	-	Milepost 354
357.684	Left	189200	Old Rich @ Badger Road
357.684	Right	189200	Old Rich @ Badger Road
357.903	Left	189000	Rozak Road
357.903	Right	189000	Rozak Road
358.102	Left	-	Unknown Named Road
358.321	Right	-	Milepost 355
358.834	Left	-	Midland Street

Highway Log Report

CDS Route: 190000 Richardson Highway (Internal Dup # 0)

Milepoint: 350.000 **to** 362.327

General Direction: West

Features Selected:

 Cross Streets  Mileposts  Bridges/Culverts  Railroads Crossings  Buildings/Landmarks

Milepoint	Side	Feature CDS	Feature
359.311	Right	-	Milepost 356
359.331	-	-	Road Continues
359.331	Both	-	Davision Street
359.541	-	-	Road Continues
359.541	Left	-	Lu Anne Road
359.541	Right	-	Westcott Garden Lane
359.921	Left	188807	Badger Loop - Rich SB Ramp
360.001	Right	188809	Rich NB - Badger Loop Ramp
360.116	-	-	Boundary Change
360.341	Right	-	Milepost 357
360.365	-	-	Road Continues
360.365	Ahead	-	Badger Loop Under Xing Br# 1959 Begin Deck
360.378	Under	-	Badger Loop Road
360.391	Behind	-	Badger Loop U.C. 1959 End Deck
360.671	Under	-	Channel B Culverts (Rich) Br# 4078
360.854	Left	188806	Rich SB - Badger Loop Ramp
360.911	Right	188808	Badger Loop - Rich NB Ramp
360.961	Right	-	Rwis Stn/Badger Interchge
361.363	Right	-	Milepost 358
361.463	-	-	Road Continues
361.688	-	-	Road Continues
361.998	Right	189500	Wainwright 3 Mi Gate Road
362.326	Right	-	Milepost 359

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES TWVRM13
11/28/11 **SUMMARY DATA - ADT** 11:33:47.4

STATION ID 31653000 EAST-WEST ROUTE 190000 MILEPOINT 357.328
RICHARDSON HWY EAST OF OLD RICH LOOP A (5 MILE) (COMBINED)

		--------- PERCENT OF ANNUAL AVERAGE DAILY TRAFFIC ---------						
YEAR	AADT	MON	TUE	WED	THR	FRI	SAT	SUN
2000	15316	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	14488	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	16685	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	16871	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	16747	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	13963	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PF1 - INQUIRY PF2 - HELP PF3 - QUIT PF4 - TDS MENU
PF5 - SELECTION PF10-NEXT STATION

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES TWVRM13

12/09/11 **SUMMARY DATA - ADT** 09:46:45.4

STATION ID **32146000 EAST-WEST** ROUTE **189200** MILEPOINT **0.065**

OLD RICHARDSON HIGHWAY BADGER LOOP A NORTH OF RICHARDSON HWY

		--------- PERCENT OF ANNUAL AVERAGE DAILY TRAFFIC ---------						
YEAR	AADT	MON	TUE	WED	THR	FRI	SAT	SUN
2004	528	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	629	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	573	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008	678	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	601	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	676	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PF1 - INQUIRY PF2 - HELP PF3 - QUIT PF4 - TDS MENU

PF5 - SELECTION PF10-NEXT STATION

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES TWVRM13
12/09/11 **SUMMARY DATA - ADT** 09:47:26.2

STATION ID **31952000 NORTH-SOUTH** ROUTE **188200** MILEPOINT **4.758**
OLD RICHARDSON HWY SOUTH OF RICHARDSON HWY (HAWKS GREENHOUSE)

		--------- PERCENT OF ANNUAL AVERAGE DAILY TRAFFIC ---------						
YEAR	AADT	MON	TUE	WED	THR	FRI	SAT	SUN
2009	2293	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	2493	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PF1 - INQUIRY PF2 - HELP PF3 - QUIT PF4 - TDS MENU
PF5 - SELECTION PF10-NEXT STATION

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES TWVRM13
12/09/11 **SUMMARY DATA - ADT** 09:48:16.0

STATION ID **32142000 NORTH-SOUTH** ROUTE **189000** MILEPOINT **0.358**
ROZAK ROAD SOUTH OF RICHARDSON HIGHWAY

		--------- PERCENT OF ANNUAL AVERAGE DAILY TRAFFIC ---------						
YEAR	AADT	MON	TUE	WED	THR	FRI	SAT	SUN
2005	189	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	141	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2007	213	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008	254	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	167	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PF1 - INQUIRY PF2 - HELP PF3 - QUIT PF4 - TDS MENU
PF5 - SELECTION PF10-NEXT STATION

Design Criteria:
Richardson Highway

ALASKA DOT&PF PRECONSTRUCTION MANUAL
Chapter 11 - Design
PROJECT DESIGN CRITERIA

Project Name: Richardson Hwy MP 353-357 Access Improvements

☑ New Construction/Reconstruction	☐ Rehabilitation ☐ Other:			
Project Number:	HRO-OA2-4(19) / 66148			
Functional Classification:	Four-lane Divided Urban Interstate		**Terrain:**	Level
Design Year:	2035			
Present ADT:	14,000 (2010)			
Design Year ADT:	23,000 (2035)			
Mid Design Period ADT:	18,800 (2025)			
DHV:	12%			
Direction Split:	45/55			
Trucks:	8% Total			
Equivalent Axle Loading:	3,426,051			
Pavement Design Year:	Functional Failure (15 years) 2029 Fatigue Failure (15 years) 2029			
Design Vehicle:	WB - 65			
Design Speed:	70 mph			
Stopping Sight Distance:	730 feet			
Passing Sight Distance:	2480 feet			
Maximum Allowable Grade:	3%			
Minimum Allowable Grade:	0%			
Maximum Degree of Curvature:	2050 feet			
Minimum K-Value for Vertical Curve:	**Sag:**	181	**Crest:**	247
Number of Roadways:	1			
Width of Traveled Way:	Divided highway - 24' width (36'-48' in acceleration, deceleration and auxiliary lane highway sections)			
Width of Shoulders:	**Outside:**	10 feet reducing to 6 feet next to auxillary, acceleration/decelleration lanes.	**Inside:**	4 feet
Surface Treatment:	**T/W:**	Asphalt Concrete	**Shoulders:**	Asphalt Concrete
Side Slope Ratios:	**Foreslopes:**	Varies 4:1 to 6:1	**Backslopes:**	4:1
Degree of Access Control:	Partial access control with breaks at designated at-grade intersections. No direct driveways permitted.			
Median Treatment:	Closed intersections - grass median. New intersections - Asphalt Concrete.			
Illumination:	Lighting at intersections, acceleration and deceleration lanes, auxillary lanes, and in-between lane ends.			
Curb Usage and Type:	N/A			
Bicycle Provisions:	Shoulders			
Pedestrian Provisions:	Shoulders			
Misc. Criteria:	30' Clear Zone, 1600' Acceleration Lanes with 300' tapers, 600' Deceleration Lanes with 250' tapers.			

Proposed - Designer/Consultant: Keith Hanneman, PDC Inc. Engineers · **Date:** 12/26/12

Endorsed - Engineering Manager: **Date:** 12/27/2012

Approved - Preconstruction Engineer: **Date:** 12/28/12

Design Criteria: Frontage Roads

ALASKA DOT&PF PRECONSTRUCTION MANUAL
Chapter 11 - Design
PROJECT DESIGN CRITERIA

Project Name: Richardson Hwy MP 353-357 Access Improvements

☑ New Construction/Reconstruction	☐ Rehabilitation ☐ Other:			
Project Number:	HRO-OA2-4(19) / 66148			
Functional Classification:	Frontage Road (Rural Collector)		**Terrain:**	Level
Design Year:	2035			
Present ADT:	675 (2010) at Old Rich at River's Wood			
Design Year ADT:	1,107 (2035)			
Mid Design Period ADT:	908 (2025)			
DHV:	12%			
Direction Split:	45/55			
Trucks:	8% Total			
Equivalent Axle Loading:	165,239			
Pavement Design Year:	Functional Failure (15 years) 2029	Fatigue Failure (15 years) 2029		
Design Vehicle:	WB-65			
Design Speed:	40 mph			
Stopping Sight Distance:	305 feet			
Passing Sight Distance:	1470 feet			
Maximum Allowable Grade:	7%			
Minimum Allowable Grade:	0%			
Maximum Degree of Curvature:	11° or 510' minimum radius			
Minimum K-Value for Vertical Curve:	**Sag:**	64	**Crest:**	44
Number of Roadways:	1			
Width of Traveled Way:	min 22' (use 24')			
Width of Shoulders:	**Outside:**	5' (use 3')*	**Inside:**	N/A
Surface Treatment:	**T/W:**	Asphalt Concrete	**Shoulders:**	Asphalt Concrete
Side Slope Ratios:	**Foreslopes:**	4:1	**Backslopes:**	6:1 or flatter
Degree of Access Control:	Common Access Control (i.e. Driveway Permits)			
Median Treatment:	N/A			
Illumination:	Lighting at Intersections			
Curb Usage and Type:	N/A			
Bicycle Provisions:	Traveled way			
Pedestrian Provisions:	Traveled way			
Misc. Criteria:	14' Clear Zone			

Proposed - Designer/Consultant: Keith Hanneman, PDC Inc. Engineers — **Date:** 12/26/12

Endorsed - Engineering Manager: — **Date:** 12/27/2012

Approved - Preconstruction Engineer: for — **Date:** 12/28/12

* Shoulder width may be reduced as long as a minimum roadway width of 30' is met. Page 429, Exibit 6-5, AASHTO Green Book

Accident Data (2005-2009)

Report Date: Tue Apr 03 15:03:33 AKDT 2012
Expanded Accident Data Extract for Date Range 01/01/2005 to 12/31/2009
CDS Number: 190000
From Milepoint: 355.027 to Milepoint 361.128
Route Description: Richardson Highway
extracted from Highway Data Port - expanded report

AccNum	DataSource	PoliceDept	PCase_Num	CDS Rte	AccMipt	Road Name	AccDate	AccDay	AccTime	Street	CrossStreet	InterDist
200800575	Data Is Only From Police	Alaska State Troopers	85718	190000	355.241	Richardson Highway	20080122	Tuesday	1219	Richardson Hwy NB Ft	Milepost 352	0.1
200505316	Data Is Only From Police	Alaska State Troopers	528322	190000	355.341	Richardson Highway	20050417	Sunday	721	Richardson Hwy NB	MP 352	0
200506903	Data Is Only From Police	Alaska State Troopers	544122	190000	355.341	Richardson Highway	20050607	Tuesday	1851	Richardson Hwy SB	MP 352	0
200507521	Data Is Only From Police	Alaska State Troopers	549943	190000	355.341	Richardson Highway	20050624	Friday	1115	Richardson Hwy	MP 352	0
200512002	Data Is Only From Police	Alaska State Troopers	586883	190000	355.341	Richardson Highway	20051015	Saturday	1010	Richardson Hwy NB	Mile 352	0
200701995	Data Is Only From Police	Alaska State Troopers	719845	190000	355.341	Richardson Highway	20070313	Tuesday	2249	Richardson Hwy SB	Mile 352	0
200802762	Data Is Only From Police	Alaska State Troopers	833801	190000	355.341	Richardson Highway	20080504	Sunday	1623	Richardson Hwy	Mile 352	0
200806737	Data Is Only From Police	Alaska State Troopers	866545	190000	355.341	Richardson Highway	20080811	Monday	1422	Richardson Hwy	MP 352	0
200808678	Data Is Only From Police	Alaska State Troopers	883115	190000	355.341	Richardson Highway	20081003	Friday	1700	Richardson Hwy	Mile Marker 352	0
200813164	Data Is Only From Police	Alaska State Troopers	8105245	190000	355.341	Richardson Highway	20081222	Monday	1048	Richardson Hwy	MP 352	0
200613540	Data Is Only From Police	Alaska State Troopers	6109437	190000	355.805	Richardson Highway	20061218	Monday	1715	Richardson Hwy S/B	353.5	0
200608682	Data Is Only From Police		671071	190000	355.842	Richardson Highway	20060809	Wednesday	13	Richardson Hwy N/B	Mile Marker 352.5	0
200802537	Data Is Only From Police	Alaska State Troopers	830209	190000	355.842	Richardson Highway	20080422	Tuesday	2302	Richardson Hwy	Mile 352	0.5
200910298	Data Is Only From Police	Alaska State Troopers	978503	190000	355.859	Richardson Highway	20090830	Sunday	3	Richardson Hwy	MP 352.5	0
200807903	Data Is Only From Police	Alaska State Troopers	877124	190000	356.327	Richardson Highway	20080914	Sunday	538	Richardson Hwy	MP 353	50
200905940	Data Is Only From Police	Alaska State Troopers	934907	190000	356.328	Richardson Highway	20090503	Sunday	845	Richardson Hwy	MP 353	0
200500931	Data Is Only From Police	Alaska State Troopers	54189	190000	356.337	Richardson Highway	20050117	Monday	720	Richardson Hwy NB	Mile 353	0
200511349	Data Is Only From Police	Alaska State Troopers	582189	190000	356.337	Richardson Highway	20050929	Thursday	1731	Richardson Hwy SB	MP 353	0
200711198	Data Is Only From Police	Alaska State Troopers	746398	190000	356.337	Richardson Highway	20070609	Saturday	224	Richardson Hwy NB	Mile 353	0
200710433	Data Is Only From Police	Alaska State Troopers	798515	190000	356.337	Richardson Highway	20071122	Thursday	742	Richardson Hwy SB	MP 353	0
200803641	Data Is Only From Police	Alaska State Troopers	840054	190000	356.337	Richardson Highway	20080524	Saturday	1554	Richardson Hwy	353 Mile Post	0
200808687	Data Is Only From Police	Alaska State Troopers	883204	190000	356.337	Richardson Highway	20081003	Friday	2158	Richardson Hwy	Mile 353	0
200802888	Data Is Only From An Individual Participant			190000	356.337	Richardson Highway	20081205	Friday	0	Richardson Hwy	MP 353	353
200501969	Data Is Only From An Individual Participant			190000	356.339	Richardson Highway	20050206	Sunday	1800	Richardson NB	Badger Rd	4
200505319	Data Is Only From Police	Alaska State Troopers	528326	190000	356.396	Richardson Highway	20050417	Sunday	906	Richardson Hwy NB	MP 353	300
200614557	Data Is Only From Police	Alaska State Troopers	6106511	190000	356.686	Richardson Highway	20061207	Thursday	1458	Richardson Hwy SB	Rentals St	0
200812780	Data Is Only From Police	Alaska State Troopers	8103312	190000	356.686	Richardson Highway	20081215	Monday	1815	Richardson Hwy	Rentals St	0
200513147	Data Is Only From Police	Alaska State Troopers	595128	190000	357.039	Richardson Highway	20051115	Tuesday	2140	Richardson Hwy SB	Mile 353.7	0
200902983	Data Is Only From Police	Alaska State Troopers	912827	190000	357.334	Richardson Highway	20090215	Sunday	524	Richardson Hwy	354 Mile	0
200513862	Data Is Only From An Individual Participant			190000	357.335	Richardson Highway	20051130	Wednesday	1600	Richardson Hwy SB	Mile 354	0
200711243	Data Is Only From Police	Alaska State Troopers	749910	190000	357.335	Richardson Highway	20070618	Monday	1716	Richardson Hwy SB	MP 354	0
200709559	Data Is Only From An Individual Participant			190000	357.335	Richardson Highway	20071105	Monday	630	Richardson Hwy NB	MP 354	0
200709754	Data Is Only From An Individual Participant			190000	357.335	Richardson Highway	20071110	Saturday	1155	Richardson Hwy NB	MP 354	0
200808679	Data Is Only From Police	Alaska State Troopers	883144	190000	357.335	Richardson Highway	20081003	Friday	1745	Richardson Hwy	Mile Marker 354	0
200812261	Data Is Only From Police	Alaska State Troopers	8100559	190000	357.636	Richardson Highway	20081206	Saturday	955	Richardson Hwy N	MP 354.3	0
200703490	Data Is Only From Police	Alaska State Troopers	715554	190000	357.689	Richardson Highway	20070226	Monday	615	Richardson Hwy	Rentals St	1
200903722	Data Is Only From Police	Alaska State Troopers	916543	190000	357.827	Richardson Highway	20090228	Saturday	1240	Richardson Hwy	Mm 354.5	0
200512969	Data Is Only From Police	Alaska State Troopers	586853	190000	357.903	Richardson Highway	20051015	Saturday	759	Richardson Hwy NB	Rozale Rd	0
200600125	Data Is Only From Police	Alaska State Troopers	6949	190000	357.903	Richardson Highway	20060104	Wednesday	1414	Richardson Hwy WB	Rozak St SB	0
200701170	Data Is Only From An Individual Participant			190000	357.903	Richardson Highway	20070203	Saturday	1430	Richardson Hwy SB	Rozak Rd	0
200908466	Data Is Only From An Individual Participant			190000	357.903	Richardson Highway	20090711	Saturday	2200	Richardson Highway	Royak Road	0
200912017	Data Is Only From An Individual Participant			190000	357.903	Richardson Highway	20091027	Tuesday	730	1780 Richardson Highway	River's Wood Products	0
200601054	Data Is Only From Police	Alaska State Troopers	65985	190000	357.913	Richardson Highway	20060122	Sunday	835	Richardson Hwy SB	Rozak Rd	75
200813470	Data Is Only From Police	Alaska State Troopers	8106657	190000	357.923	Richardson Highway	20081228	Sunday	156	Richardson Hwy	Rozak Rd	100
200500351	Data Is Only From Police	Alaska State Troopers	51719	190000	357.944	Richardson Highway	20050107	Friday	935	Richardson Hwy NB	Rozak Rd	200
200903721	Data Is Only From Police	Alaska State Troopers	916542	190000	358	Richardson Highway	20090228	Saturday	1236	Richardson_Hwy	MP 355	0
200705060	Data Is Only From Police	Alaska State Troopers	753464	190000	358.005	Richardson Highway	20070628	Thursday	1727	Richardson Hwy SB	Rozak Rd	530
200702041	Data Is Only From Police	Alaska State Troopers	720312	190000	358.308	Richardson Highway	20070315	Thursday	1605	Richardson Hwy	MP 310.7	43.7
200912002	Data Is Only From Police	Alaska State Troopers	996518	190000	358.321	Richardson Highway	20091026	Monday	1821	Richardson Highway	MP 355	0
200603139	Data Is Only From An Individual Participant			190000	358.328	Richardson Highway	20060228	Tuesday	231	Richardson Hwy	Mile 355	0
200704033	Data Is Only From Police	Alaska State Troopers	715060	190000	358.328	Richardson Highway	20070224	Saturday	10	Richardson Hwy SB	Mi 355	0
200800477	Data Is Only From Police	Alaska State Troopers	84872	190000	358.328	Richardson Highway	20080118	Friday	9999	Richardson Hwy	MP 355	335
200804485	Data Is Only From Police	Alaska State Troopers	849645	190000	358.328	Richardson Highway	20080623	Monday	1233	Richardson Hwy	MP 355	0
200805489	Data Is Only From An Individual Participant			190000	358.328	Richardson Highway	20080704	Friday	2355	Richardson	MP 355	0
200903718	Data Is Only From Police	Alaska State Troopers	916498	190000	358.821	Richardson Highway	20090228	Saturday	1039	Richardson Hwy	MP 355.5	0
200511883	Data Is Only From Police	Alaska State Troopers	586249	190000	358.837	Richardson Highway	20051013	Thursday	742	Richardson Hwy NB	MP 355.5	255.5
200501032	Data Is Only From Police	Alaska State Troopers	54654	190000	359.321	Richardson Highway	20050119	Wednesday	708	Richardson Hwy NB	MP 356	0
200711843	Data Is Only From Police	Alaska State Troopers	789308	190000	359.321	Richardson Highway	20071018	Thursday	1732	Richardson NB	Mi 356	0
200712840	Data Is Only From Police	Alaska State Troopers	7105970	190000	359.321	Richardson Highway	20071221	Friday	1712	Richardson Hwy SB	MP 356	0
200803669	Data Is Only From Police	Alaska State Troopers	840219	190000	359.321	Richardson Highway	20080525	Sunday	334	Richardson Hwy	Frontage Rd (MP 356)	0
200803849	Data Is Only From Police	Alaska State Troopers	842538	190000	359.321	Richardson Highway	20080601	Sunday	1821	Richardson Hwy	MP 356	0
200506857	Data Is Only From An Individual Participant			190000	359.331	Richardson Highway	20050506	Friday	1350	Richardson Hwy NB	Davidson St	0
200508441	Data Is Only From An Individual Participant			190000	359.331	Richardson Highway	20050719	Tuesday	1430	Richardson Hwy NB	Davison Rd	0
200602386	Data Is Only From Police	Alaska State Troopers	611229	190000	359.331	Richardson Highway	20060208	Wednesday	1415	Richardson Hwy	Davison St	0
200605248	Data Is Only From Police	Alaska State Troopers	640228	190000	359.331	Richardson Highway	20060515	Monday	1412	Richardson Hwy	Davison St	0
200611563	Data Is Only From Police	Fairbanks Police Dept	619803	190000	359.331	Richardson Highway	20060928	Thursday	2049	Richardson Hwy	Mile 357	0
200612607	Data Is Only From Police	Fairbanks Police Dept	620975	190000	359.331	Richardson Highway	20061015	Sunday	15	Richardson Hwy N/B	Mile 357	0
200712768	Data Is Only From Police	Alaska State Troopers	7105211	190000	359.331	Richardson Highway	20071219	Wednesday	610	Richardson Hwy NB	Davidson St	0
200501198	Data Is Only From An Individual Participant			190000	359.44	Richardson Highway	20050122	Saturday	1830	Richardson Hwy WB	Davison	0
200613121	Data Is Only From Police	Alaska State Troopers	6106558	190000	359.541	Richardson Highway	20061207	Thursday	1659	Richardson Hwy S/B	Westcott St	0
200602369	Data Is Only From An Individual Participant			190000	359.86	Richardson Highway	20060208	Wednesday	115	Richardson Hwy W/B	Badger Overpass	0.5
200909343	Data Is Only From Police	Fairbanks Police Dept	916097	190000	360	Richardson Highway	20090803	Monday	1904	Richardson Hwy	Mile 360	0
200504721	Data Is Only From Police	Fairbanks Police Dept	56866	190000	360.001	Richardson Highway	20050405	Tuesday	1613	Richardson Hwy NB	Badger Rd Exit	0
200508807	Data Is Only From An Individual Participant			190000	360.281	Richardson Highway	20050729	Friday	1400	Richardson SE	Airport Way	5
200614790	Data Is Only From Police	Fairbanks Police Dept	625732	190000	360.322	Richardson Highway	20061228	Thursday	2039	SB Richardson Hwy	Mile 357	0
200614735	Data Is Only From Police	Fairbanks Police Dept	625425	190000	360.334	Richardson Highway	20061223	Saturday	2357	Richardson Hwy SB	Badger Exit	0.5
200700374	Data Is Only From An Individual Participant			190000	360.334	Richardson Highway	20070110	Wednesday	1815	Richardson Hwy	N Badger Rd	0.5
200612602	Data Is Only From Police	Fairbanks Police Dept	620966	190000	360.357	Richardson Highway	20061014	Saturday	2330	Richardson Hwy N/B	Mile 358	0
200503864	Data Is Only From An Individual Participant			190000	360.365	Richardson Highway	20050314	Monday	545	Richardson Hwy NB	Badger Rd	0
200802454	Data Is Only From Police	Fairbanks Police Dept	86920	190000	360.365	Richardson Highway	20080418	Friday	1008	Richardson Hwy SB	Badger Rd Overpass	0
200963579	Data Is Only From An Individual Participant			190000	360.378	Richardson Highway	20091223	Wednesday	0	Richardson Hwy	Badger Rd	0
200501536	Data Is Only From Police	Alaska State Troopers	57058	190000	360.393	Richardson Highway	20050128	Friday	418	Richardson Hwy SB	Badger Rd	0
200505111	Data Is Only From An Individual Participant			190000	360.393	Richardson Highway	20050418	Monday	825	Richardson Hwy WB	St Nicholson & Badger Rd	0
200902587	Data Is Only From Police	Fairbanks Police Dept	92577	190000	360.468	Richardson Highway	20090209	Monday	52	Richardson Highway	Badger Road	500
200901209	Data Is Only From Police	Fairbanks Police Dept	9970	190000	360.548	Richardson Highway	20090116	Friday	836	Richardson Hwy NB	Badger Road	900
200600084	Data Is Only From Police	Fairbanks Police Dept	6000143	190000	360.854	Richardson Highway	20060103	Tuesday	1739	Badger Rd Offramp S/B	Richardson Hwy	0
200602878	Data Is Only From Police	Fairbanks Police Dept	63393	190000	360.907	Richardson Highway	20060220	Monday	1404	Richardson Hwy NB	Badger Rd	0.5
200801876	Data Is Only From Police	Fairbanks Police Dept	83901	190000	361.005	Richardson Highway	20080304	Tuesday	1350	Richardson Hwy	Badger Rd	900
200703220	Data Is Only From Police	Fairbanks Police Dept	71940	190000	361.01	Richardson Highway	20070130	Tuesday	1345	NB Richardson Hwy	Crossover Paved	0.25
200962187	Data Is Only From Police	Fairbanks Police Dept	926635	190000	361.128	Richardson Highway	20091231	Thursday	1150	Richardson Hy	Badger Rd	0.75

Note: The following cross streets (with CDS route numbers assigned) did not have any crashes in the database for 2005-2009 within 200' of their intersection with the Richardson Highway: Old Richardson @ Badger Road, Rozak Road, Badger Loop - Richardson

Report Date: 1
Expanded Acc
CDS Number:
From Milepoi
Route Descrip
extracted fron

AccNum	RefUnits	InterDir	RdJunct	NumVeh	AccSeverity	Tot Inj	Maj Inj	Min Inj	Tot Fatal	EveType	EveLoc	Weather	RdCharacter
200800575	Miles	South	Not a Junction	2	Non-Incapacitating/Possible Injury	2	0	2	0	Parked Vehicle	Roadway	Cloudy	Straight/Lvl
200505316	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Snoberm	Roadway	Snow	Straight/Lvl
200506903	Not Applicable to This Location	Not Applicable to This Location	Other	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadside	Clear	Straight/Lvl
200507521	Miles	South	Other	1	Non-Incapacitating/Possible Injury	1	0	1	0	Veh in Transit	Roadway	Clear	Straight/Lvl
200512002	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	3	Property Damage Only	0	0	0	0	Veh - Angle	Roadway	Snow	Straight/Lvl
200701995	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	2	0	2	0	Moose	Roadway	Cloudy	Straight/Lvl
200802762	At Int. W/	Not Applicable to This Location	4-Way Intersection	1	Non-Incapacitating/Possible Injury	1	0	1	0	Ditch	Shoulder	Cloudy	Straight/Lvl
200806737	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Ditch	Roadway	Clear	Straight/Lvl
200808678	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ditch	Roadway	Clear	Straight/Lvl
200813164	At Int. W/	Not Applicable to This Location	Not a Junction	2	Non-Incapacitating/Possible Injury	1	0	1	0	Veh - Rear End	Roadway	Clear	Straight/Lvl
200613540	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Other Fixed Object	Roadway	Clear	Straight/Lvl
200608682	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Moose	Roadway	Cloudy	Straight/Lvl
200802537	Miles	North	Not a Junction	1	Property Damage Only	0	0	0	0	Moose	Roadway	Cloudy	Straight/Lvl
200910298	At Int. W/	Not Applicable to This Location	Not a Junction	3	Incapacitating Injury	1	1	0	0	Parked Vehicle	Shoulder	Clear	Straight/Lvl
200807903	Feet	South	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Ditch	Shoulder	Clear	Straight/Lvl
200905940	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ditch	Roadside	Clear	Curve/Lvl
200500931	At Int. W/	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Moose	Roadway	Clear	Straight/Lvl
200511349	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Angle	Roadway	Cloudy	Straight/Lvl
200711198	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Ditch	Roadway	Cloudy	Straight/Lvl
200710433	At Int. W/	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Clear	Straight/Lvl
200803641	At Int. W/	Not Applicable to This Location	Other	1	Non-Incapacitating/Possible Injury	1	0	1	0	Culvert	Shoulder	Rain	Unknown
200808687	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadway	Snow	Straight/Lvl
200802888	Miles	North	Not a Junction	1	Property Damage Only	0	0	0	0	Equipment Failure	Unknown	Clear	Unknown
200501969	Miles	South	Not a Junction	1	Property Damage Only	0	0	0	0	Other	Roadway	Clear	Unknown
200505319	Feet	South	Not a Junction	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadway	Clear	Straight/Lvl
200614557	At Int. W/	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Snow	Straight/Lvl
200812780	At Int. W/	Not Applicable to This Location	Crossover	1	Property Damage Only	0	0	0	0	Snoberm	Shoulder	Blowing, Sand, Soil, Dirt, Snow	Straight/Lvl
200513147	At Int. W/	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Clear	Straight/Lvl
200902983	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	4	0	4	0	Ditch	Roadway	Clear	Straight/Lvl
200513862	At Int. W/	Not Applicable to This Location	Unknown	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Cloudy	Unknown
200711243	At Int. W/	Not Applicable to This Location	Not a Junction	2	Non-Incapacitating/Possible Injury	1	0	1	0	Veh - Head On	Roadside	Clear	Straight/Lvl
200709559	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ditch	Roadway	Clear	Unknown
200709754	At Int. W/	Not Applicable to This Location	Unknown	1	Property Damage Only	0	0	0	0	Moose	Roadway	Blowing, Sand, Soil, Dirt, Snow	Unknown
200808679	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ditch	Roadway	Clear	Straight/Lvl
200812261	At Int. W/	Not Applicable to This Location	Crossover	2	Property Damage Only	0	0	0	0	Veh - Angle	Roadway	Snow	Straight/Lvl
200703490	Miles	North	Not a Junction	2	Property Damage Only	0	0	0	0	Ran Off Road	Roadway	Cloudy	Straight/Lvl
200903722	At Int. W/	Not Applicable to This Location	Not a Junction	3	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Snow	Straight/Lvl
200512969	At Int. W/	Not Applicable to This Location	Other	2	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Cloudy	Straight/Lvl
200600125	At Int. W/	Not Applicable to This Location	4-Way Intersection	2	Incapacitating Injury	3	1	2	0	Veh - Angle	Roadway	Clear	Straight/Lvl
200701170	At Int. W/	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Angle	Roadway	Clear	Unknown
200908466	At Int. W/	Not Applicable to This Location	4-Way Intersection	1	Property Damage Only	0	0	0	0	Moose	Roadway	Clear	Unknown
200912017	At Int. W/	Not Applicable to This Location	Unknown	2	Property Damage Only	0	0	0	0	Veh in Transit	Roadway	Snow	Unknown
200601054	Feet	North	T - Intersection	1	Property Damage Only	0	0	0	0	Moose	Roadway	Snow	Straight/Lvl
200813470	Feet	North	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Moose	Roadway	Clear	Straight/Lvl
200500351	Feet	South	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Clear	Straight/Lvl
200903721	At Int. W/	Not Applicable to This Location	Not a Junction	2	Non-Incapacitating/Possible Injury	1	0	1	0	Veh - Rear End	Roadway	Cloudy	Straight/Lvl
200705060	Feet	North	Not a Junction	4	Non-Incapacitating/Possible Injury	4	0	4	0	Veh - Rear End	Roadway	Clear	Straight/Lvl
200702041	Miles	North	Not a Junction	2	Non-Incapacitating/Possible Injury	1	0	1	0	Veh - Angle	Roadway	Clear	Curve/Grd
200912002	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	3	Non-Incapacitating/Possible Injury	1	0	1	0	Veh - Rear End	Roadway	Snow	Straight/Lvl
200603139	At Int. W/	Not Applicable to This Location	Unknown	1	Property Damage Only	0	0	0	0	Moose	Roadway	Clear	Unknown
200704033	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	2	0	2	0	Moose	Roadway	Clear	Straight/Lvl
200800477	Miles	South	Driveway	1	Property Damage Only	0	0	0	0	Overturn	Roadway	Unknown	Straight/Lvl
200804485	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Moose	Roadway	Clear	Straight/Lvl
200805489	Not Applicable to This Location	Not Applicable to This Location	T - Intersection	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadway	Clear	Unknown
200903718	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Snow	Straight/Lvl
200511883	Miles	North	Other	1	Property Damage Only	0	0	0	0	Overturn	Roadway	Cloudy	Straight/Lvl
200501032	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Moose	Roadway	Ice Fog	Straight/Lvl
200711843	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadside	Cloudy	Straight/Lvl
200712840	At Int. W/	Not Applicable to This Location	Other	2	Non-Incapacitating/Possible Injury	2	0	2	0	Veh - Angle	Roadway	Cloudy	Straight/Hlcrst
200803669	At Int. W/	Not Applicable to This Location	4-Way Intersection	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadway	Cloudy	Straight/Lvl
200803849	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ditch	Median	Clear	Straight/Lvl
200506857	Not Applicable to This Location	Not Applicable to This Location	Y - Intersection	1	Property Damage Only	0	0	0	0	Animal	Roadway	Clear	Unknown
200508441	At Int. W/	Not Applicable to This Location	Crossover	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Clear	Unknown
200602386	At Int. W/	Not Applicable to This Location	Crossover	2	Non-Incapacitating/Possible Injury	1	0	1	0	Veh - Rear End	Roadway	Clear	Straight/Lvl
200605248	At Int. W/	Not Applicable to This Location	Crossover	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Rain	Straight/Lvl
200611563	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Moose	Roadway	Cloudy	Straight/Grd
200612607	At Int. W/	Not Applicable to This Location	Not a Junction	1	Incapacitating Injury	1	1	0	0	Ran Off Road	Roadside	Blowing, Sand, Soil, Dirt, Snow	Straight/Lvl
200712768	At Int. W/	Not Applicable to This Location	T - Intersection	2	Property Damage Only	0	0	0	0	Sideswipe	Roadway	Cloudy	Straight/Lvl
200501198	At Int. W/	Not Applicable to This Location	4-Way Intersection	2	Property Damage Only	0	0	0	0	Veh in Transit	Roadway	Clear	Unknown
200613121	At Int. W/	Not Applicable to This Location	Not a Junction	3	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Clear	Straight/Lvl
200602369	Miles	East	Unknown	1	Property Damage Only	0	0	0	0	Snoberm	Median	Clear	Unknown
200909343	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Light Support	Shoulder	Clear	Curve/Lvl
200504721	At Int. W/	Not Applicable to This Location	Off Ramp	1	Property Damage Only	0	0	0	0	Guardrail End	Shoulder	Cloudy	Straight/Grd
200508807	Miles	Unknown Direction	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Clear	Unknown
200614790	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Snoberm	Roadway	Clear	Straight/Lvl
200614735	Miles	South	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Snow	Straight/Lvl
200700374	Miles	South	Other	1	Property Damage Only	0	0	0	0	Other Fixed Object	Unknown	Clear	Unknown
200612602	At Int. W/	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Ran Off Road	Roadway	Not Rep	Straight/Lvl
200503864	Not Applicable to This Location	Not Applicable to This Location	Other	1	Non-Incapacitating/Possible Injury	1	0	1	0	Snoberm	Median	Clear	Unknown
200802454	At Int. W/	Not Applicable to This Location	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Guardrail Face	Roadway	Snow	Straight/Lvl
200963579	At Int. W/	Not Applicable to This Location	Other	1	Property Damage Only	0	0	0	0	Other Fixed Object	Roadway	Clear	Unknown
200501536	Not Applicable to This Location	Not Applicable to This Location	Not a Junction	1	Property Damage Only	0	0	0	0	Moose	Roadway	Cloudy	Straight/Hlcrst
200505111	At Int. W/	Not Applicable to This Location	Off Ramp	2	Property Damage Only	0	0	0	0	Veh - Rear End	Roadway	Snow	Unknown
200902587	Feet	North	Not a Junction	1	Property Damage Only	0	0	0	0	Moose	Roadway	Snow	Straight/Lvl
200901209	Feet	North	Not a Junction	1	Property Damage Only	0	0	0	0	Overturn	Median	Cloudy	Curve/Hlcrst
200600084	At Int. W/	Not Applicable to This Location	Off Ramp	1	Property Damage Only	0	0	0	0	Guardrail Face	Shoulder	Clear	Unknown
200602878	Miles	North	Not a Junction	2	Property Damage Only	0	0	0	0	Veh - Angle	Roadway	Not Rep	Straight/Lvl
200801876	Feet	North	Not a Junction	2	Non-Incapacitating/Possible Injury	1	0	1	0	Snoberm	Median	Clear	Straight/Lvl
200703220	Miles	North	Not a Junction	1	Non-Incapacitating/Possible Injury	1	0	1	0	Ditch	Roadway	Clear	Curve/Lvl
200962187	Miles	North	Not a Junction	2	Non-Incapacitating/Possible Injury	2	0	2	0	Veh - Rear End	Roadway	Clear	Straight/Lvl

Note: The folh SB Ramp and Richardson NB - Badger Loop Ramp

Report Date: 1
Expanded Acc
CDS Number:
From Milepoi
Route Descrip
extracted fron

AccNum	SurfaceCond	Light	v1TotalOccupants	v1DriverInjStatus	v1DriverSafeEquip1	v1DriverSafeEquip2	v1DriverAge	v1DriverSex	v1DriverAlcDrugSusp	v1DriverAlcDrugTestGiv	v1DriverBloodAlcCount
200800575	Ice	Daylight	2	Non-Incapacitating	Lap/Shoulder	A/Bag Not Dplyp	46	Male	None	Not Given	
200505316	Ice	Daylight	1	None	Lap/Shoulder	Unknown	54	Female	None	Not Given	
200506903	Dry	Daylight	1	None	Lap/Shoulder	Unknown	16	Male	None	Not Given	
200507521	Dry	Daylight	2	Non-Incapacitating	Not Rep	Unknown	16	Male	None	Not Given	
200512002	Ice	Daylight	1	None	Lap/Shoulder	A/Bag Not Dplyp	62	Female	None	Not Given	
200701995	Dry	Dark - Roadway Not Lighted	4	Possible	Lap/Shoulder	Unknown	28	Female	None	Not Given	
200802762	Dry	Daylight	1	Possible	Lap/Shoulder	A/Bag Dplyd	18	Female	None	Not Given	
200806737	Dry	Daylight	1	Possible	Lap/Shoulder	A/Bag Dplyd	17	Male	None	Not Given	
200808678	Ice	Daylight	3	None	Lap/Shoulder	A/Bag Not Dplyp	28	Female	None	Not Given	
200813164	Ice	Daylight	2	Possible	Lap/Shoulder	A/Bag Not Dplyp	17	Male	None	Not Given	
200613540	Dry	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	Unknown	35	Male	None	Not Given	
200608682	Dry	Dark - Unknown Lighting	3	Non-Incapacitating	Lap/Shoulder	Unknown	38	Male	None	Not Given	
200802537	Dry	Dark - Roadway Not Lighted	2	None	Lap/Shoulder	A/Bag Not Dplyp	39	Male	None	Not Given	
200910298	Dry	Dark - Roadway Not Lighted	1	Incapacitating	Helmet	Unknown	22	Male	None	Not Given	
200807903	Dry	Dark - Roadway Not Lighted	1	Non-Incapacitating	Lap/Shoulder	A/Bag Not Dplyp	17	Male	None	Not Given	
200905940	Dry	Daylight	1	None	Lap/Shoulder	A/Bag Not Dplyp	21	Female	Alcohol	Breath	134
200500931	Ice	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	A/Bag Not Dplyp	40	Female	None	Not Given	
200511349	Wet	Daylight	1	None	Lap/Shoulder	A/Bag Not Dplyp	43	Male	None	Not Given	
200711198	Dry	Daylight	1	Possible	Not Used	Unknown	23	Female	Alcohol	Not Given	
200710433	Ice	Dark - Roadway Not Lighted	2	Not Reported	Lap/Shoulder	A/Bag Not Dplyp	23	Male	None	Not Given	
200803641	Sand, Mud, Dirt, Oil, Gravel	Daylight	1	Non-Incapacitating	Not Used	Unknown	63	Male	None	Not Given	
200808687	Ice	Dark - Lighted Roadway	1	None	Lap/Shoulder	Unknown	50	Male	None	Not Given	
200802888	Dry	Daylight	2	None	Not Rep	Unknown	46	Unknown	Not Reported	Unknown	
200501969	Snow	Twilight	1	None	Not Rep	Unknown	66	Unknown	Not Reported	Unknown	
200505319	Missing	Daylight	1	None	Lap/Shoulder	Unknown	38	Female	None	Not Given	
200614557	Snow	Daylight	1	None	Lap/Shoulder	Unknown	77	Male	None	Not Given	
200812780	Snow	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	A/Bag Not Dplyp	25	Male	None	Not Given	
200513147	Dry	Dark - Roadway Not Lighted	1	Not Reported	Lap/Shoulder	Unknown	25	Male	None	Not Given	
200902983	Dry	Dark - Roadway Not Lighted	4	Non-Incapacitating	Lap/Shoulder	Unknown	25	Male	Alcohol	Breath	60
200513862	Ice	Twilight	1	None	Not Rep	Unknown	48	Unknown	Not Reported	Unknown	
200711243	Dry	Daylight	1	Non-Incapacitating	Lap/Shoulder	A/Bag Dplyd	52	Female	None	Not Given	
200709559	Dry	Dark - Roadway Not Lighted	1	None	Not Rep	Unknown	50	Female	Not Reported	Unknown	
200709754	Ice	Dark - Roadway Not Lighted	1	None	Not Rep	Unknown	30	Male	Not Reported	Unknown	
200808679	Ice	Daylight	1	None	Lap/Shoulder	A/Bag Not Dplyp	62	Female	None	Not Given	
200812261	Ice	Daylight	2	None	Lap/Shoulder	A/Bag Not Dplyp	34	Male	None	Not Given	
200703490	Snow	Dark - Roadway Not Lighted	1	Unknown	Unknown	Unknown		Unknown	None	Not Given	
200903722	Snow	Daylight	2	None	Lap/Shoulder	A/Bag Dplyd	20	Male	None	Not Given	
200512969	Ice	Twilight	1	Not Reported	Lap/Shoulder	Unknown	44	Female	None	Not Given	
200600125	Dry	Daylight	4	None	Lap/Shoulder	Unknown	20	Male	None	Not Given	
200701170	Ice	Daylight	5	None	Not Rep	Unknown	33	Unknown	Not Reported	Unknown	
200908466	Dry	Daylight	1	None	Not Rep	Unknown	80	Unknown	Not Reported	Unknown	
200912017	Snow	Dark - Roadway Not Lighted	1	None	Not Rep	Unknown	30	Unknown	Not Reported	Unknown	
200601054	Ice	Dark - Roadway Not Lighted	2	None	Lap/Shoulder	Unknown	49	Female	None	Not Given	
200813470	Dry	Dark - Roadway Not Lighted	3	Non-Incapacitating	Lap/Shoulder	A/Bag Not Dplyp	27	Male	None	Not Given	
200500351	Snow	Twilight	2	None	Lap/Shoulder	Unknown	39	Female	None	Not Given	
200903721	Ice	Daylight	1	Possible	Lap/Shoulder	A/Bag Dplyd	24	Female	None	Not Given	
200705060	Dry	Daylight	1	Non-Incapacitating	Lap/Shoulder	Unknown	31	Female	None	Not Given	
200702041	Dry	Daylight	3	Non-Incapacitating	Lap/Shoulder	A/Bag Not Dplyp	40	Female	None	Not Given	
200912002	Ice	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	A/Bag Dplyd	21	Female	None	Not Given	
200603139	Ice	Dark - Roadway Not Lighted	1	None	Not Rep	Unknown	43	Female	None	Not Given	
200704033	Dry	Dark - Roadway Not Lighted	2	Non-Incapacitating	Lap/Shoulder	A/Bag Not Dplyp	20	Male	None	Not Given	
200800477	Ice	Unknown	1	Unknown	Unknown	Unknown		Unknown	Alcohol	Not Given	
200804485	Dry	Daylight	1	None	Lap/Shoulder	A/Bag Not Dplyp	18	Male	None	Not Given	
200805489	Dry	Twilight	5	None	Not Rep	Unknown	18	Unknown	Not Reported	Unknown	
200903718	Ice	Daylight	1	None	Lap/Shoulder	Unknown	22	Male	None	Not Given	
200511883	Ice	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	Unknown	46	Male	None	Not Given	
200501032	Ice	Dark - Lighted Roadway	1	None	Lap/Shoulder	Unknown	36	Female	None	Not Given	
200711843	Ice	Daylight	1	None	Lap/Shoulder	A/Bag Not Dplyp	46	Female	None	Not Given	
200712840	Ice	Dark - Lighted Roadway	2	Possible	Lap/Shoulder	A/Bag Not Dplyp	36	Male	None	Not Given	
200803669	Dry	Daylight	1	None	Unknown	Unknown	20	Male	Alcohol	Breath	129
200803849	Dry	Daylight	2	None	Lap/Shoulder	Unknown	20	Female	None	Not Given	
200506857	Dry	Daylight	1	None	Not Rep	Unknown	16	Unknown	Not Reported	Unknown	
200508441	Dry	Daylight	1	None	Not Rep	Unknown	27	Unknown	Not Reported	Unknown	
200602386	Ice	Daylight	6	None	Lap/Shoulder	Unknown	30	Female	None	Not Given	
200605248	Wet	Daylight	2	None	Lap/Shoulder	Unknown	25	Female	None	Not Given	
200611563	Dry	Dark - Roadway Not Lighted	2	None	Lap/Shoulder	A/Bag Not Dplyp	23	Male	None	Not Given	
200612607	Ice	Dark - Roadway Not Lighted	3	None	Lap/Shoulder	Unknown	18	Female	None	Not Given	
200712768	Ice	Dark - Roadway Not Lighted	1	Not Reported	Lap/Shoulder	Unknown	20	Male	None	Not Given	
200501198	Ice	Dark - Roadway Not Lighted	4	None	Not Rep	Unknown	17	Unknown	Not Reported	Unknown	
200613121	Ice	Dark - Lighted Roadway	1	Not Reported	Lap/Shoulder	Unknown	23	Female	None	Not Given	
200602369	Ice	Daylight	5	None	Not Rep	Unknown	40	Female	None	Not Given	
200909343	Dry	Daylight	1	Non-Incapacitating	Lap/Shoulder	Unknown	18	Female	None	Not Given	
200504721	Dry	Daylight	1	None	Lap/Shoulder	Unknown	37	Male	None	Not Given	
200508807	Dry	Daylight	3	None	Not Rep	Unknown	66	Unknown	Not Reported	Unknown	
200614790	Ice	Dark - Roadway Not Lighted	4	None	Lap/Shoulder	Unknown	18	Male	None	Not Given	
200614735	Snow	Dark - Roadway Not Lighted	1	None	Unknown	Unknown	43	Male	Alcohol	Refused	
200700374	Dry	Dark - Roadway Not Lighted	1	None	Not Rep	Unknown	29	Unknown	Not Reported	Unknown	
200612602	Slush	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	A/Bag Not Dplyp	16	Female	None	Not Given	
200503864	Ice	Dark - Lighted Roadway	1	Possible	Not Rep	Unknown	34	Unknown	Not Reported	Unknown	
200802454	Slush	Daylight	1	Non-Incapacitating	Lap/Shoulder	Unknown	52	Female	None	Not Given	
200963579	Snow	Dark - Roadway Not Lighted	1	Unknown	Not Rep	Unknown	33	Unknown	Not Reported	Unknown	
200501536	Ice	Dark - Lighted Roadway	1	None	Lap/Shoulder	Unknown	47	Male	None	Not Given	
200505111	Snow	Daylight	1	None	Not Rep	Unknown	46	Unknown	Not Reported	Unknown	
200902587	Ice	Dark - Roadway Not Lighted	5	None	Lap/Shoulder	A/Bag Not Dplyp	26	Male	None	Not Given	
200901209	Ice	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	Unknown	31	Female	None	Not Given	
200600084	Ice	Dark - Roadway Not Lighted	1	None	Lap/Shoulder	Not Rep	19	Male	None	Not Given	
200602878	Ice	Not Rep	1	None	Lap/Shoulder	Unknown	20	Male	None	Not Given	
200801876	Dry	Daylight	1	None	Lap/Shoulder	Unknown	41	Male	None	Not Given	
200703220	Ice	Daylight	4	Non-Incapacitating	Lap/Shoulder	Unknown	59	Male	None	Not Given	
200962187	Dry	Daylight	1	Non-Incapacitating	Lap/Shoulder	Unknown	17	Male	None	Not Given	

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AccNum	v1EnvCirc	v1RdCirc	v1VehCir	v1HumanCirc	v1HumanCirc2	v1TrafficControlDev	v1TrvDirect	v1ActionPreaction	v1SecEvent
200800575	None	None	None	Unsafe Speed	Missing	Other	North	Out of Control	Missing
200505316	Weather	Missing	None	Drove Off Road	Unsafe Speed	No Control	North	Out of Control	Overturn
200506903	None	None	None	Fell Asleep	Missing	No Control	South	Straight Ahead	Fence
200507521	None	None	None	Missing	Missing	Other	South	Straight Ahead	Ditch
200512002	Weather	Road Surface Condition	None	Driver Inexperience	Unsafe Speed	No Control	North	Changing Lanes	Ditch
200701995	None	None	None	Driver Inattention	Missing	No Control	South	Straight Ahead	Missing
200802762	None	None	None	Driver Inattention	Driver Inexperience	No Control	North	Out of Control	Overturn
200806737	None	None	None	Fell Asleep	Missing	No Control	West	Turning Right	Overturn
200808678	None	None	None	Driver Inexperience	Missing	No Control	South	Skidding	Overturn
200813164	None	None	None	Unsafe Speed	Missing	No Control	North	Skidding	Missing
200613540	None	Debris	None	No IMproper Driving	Missing	No Control	South	Avoiding Objects in Road	Missing
200608682	None	Obstruction in Roadway	None	No IMproper Driving	Missing	No Control	North	Straight Ahead	Seperation of Units
200802537	None	None	None	No IMproper Driving	Missing	No Control	North	Straight Ahead	Missing
200910298	None	None	Brakes Defective	Driver Inattention	Missing	No Control	North	Straight Ahead	Seperation of Units
200807903	None	None	None	Fell Asleep	Missing	No Control	North	Straight Ahead	Overturn
200905940	None	None	None	Drove Off Road	Missing	No Control	South	Straight Ahead	Overturn
200500931	None	None	None	No IMproper Driving	Missing	No Control	North	Straight Ahead	Seperation of Units
200511349	None	None	None	Improper Lane Usage/Change	Missing	No Control	South	Changing Lanes	Overturn
200711198	None	Work Zone	None	Unsafe Speed	Missing	Warning Signs	North	Passing	Missing
200710433	None	None	None	Drove Off Road	Missing	No Control	South	Out of Control	Missing
200803641	None	Ruts, Holes, Bumps	None	Unsafe Speed	Missing	No Control	South	Avoiding Objects in Road	Culvert
200808687	Weather	Road Surface Condition	None	No IMproper Driving	Missing	No Control	South	Slowing	Overturn
200802888	Missing	None	Missing	Missing	Missing	Unknown	North	Skidding	Missing
200501969	Missing	Road Surface Condition	Missing	Missing	Missing	No Control	North	Skidding	Missing
200505319	None	Other	None	Unsafe Speed	Missing	No Control	North	Out of Control	Overturn
200614557	None	None	None	Driver Inattention	Improper Lane Usage/Change	No Control	South	Changing Lanes	Missing
200812780	None	None	None	Drove Off Road	Missing	No Control	North	Changing Lanes	Overturn
200513147	None	None	None	Improper Lane Usage/Change	Missing	No Control	South	Changing Lanes	Seperation of Units
200902983	None	None	None	Unsafe Speed	Missing	No Control	South	Straight Ahead	Overturn
200513862	Missing	None	Missing	Missing	Missing	No Control	Unknown	Passing	Missing
200711243	Unknown	None	None	Illness	Loss of Consciousness	No Control	South	Straight Ahead	Veh - Head On
200709559	Missing	None	Missing	Missing	Missing	No Control	North	Other*	Missing
200709754	Missing	Obstruction in Roadway	Missing	Missing	Missing	No Control	North	Straight Ahead	Missing
200808679	None	None	None	Driver Inexperience	Missing	No Control	South	Skidding	Overturn
200812261	None	None	None	Stop Sign Violation	Missing	Stop Sign	West	Straight Ahead	Median Barrier
200703490	None	None	Unknown	Improper Lane Usage/Change	Missing	No Control	North	Changing Lanes	Snowberm
200903722	None	None	None	Driver Inexperience	Unsafe Speed	Officer/Flagman/Guard	North	Skidding	Missing
200512969	None	None	None	No IMproper Driving	Missing	Other	North	Skidding	Embankment
200600125	None	None	None	Driver Inexperience	Failure to Yield	No Control	West	Straight Ahead	Missing
200701170	Missing	Other	Missing	Missing	Missing	No Control	South	Avoiding Objects in Road	Missing
200908466	Missing	Unknown	Missing	Missing	Missing	Unknown	East	Unknown	Missing
200912017	Missing	Road Surface Condition	Missing	Missing	Missing	No Control	Unknown	Other*	Missing
200601054	Weather	Other	None	No IMproper Driving	Missing	No Control	South	Straight Ahead	Missing
200813470	None	None	None	No IMproper Driving	Missing	No Control	South	Straight Ahead	Missing
200500351	None	None	None	Following Too Closely	Unsafe Speed	Other	North	Skidding	Snowberm
200903721	None	None	None	Unsafe Speed	Missing	No Control	North	Skidding	Missing
200705060	None	Work Zone	None	Driver Inattention	Unsafe Speed	Officer/Flagman/Guard	South	Skidding	Missing
200702041	None	None	None	No IMproper Driving	Driver Inexperience	No Control	North	Passing	Tree/Shrub
200912002	Weather	None	None	Driver Inexperience	Unsafe Speed	No Control	North	Skidding	Veh -Rear End
200603139	Missing	None	Missing	Missing	Missing	No Control	North	Straight Ahead	Missing
200704033	None	None	None	Driver Inattention	Missing	No Control	South	Straight Ahead	Missing
200800477	Unknown	None	Unknown	Drove Off Road	Missing	No Control	South	Out of Control	Ditch
200804485	None	None	None	No IMproper Driving	Missing	No Control	North	Straight Ahead	Missing
200805489	Missing	Other	Missing	Missing	Missing	Other	South	Straight Ahead	Missing
200903718	None	None	None	Following Too Closely	Unsafe Speed	No Control	North	Straight Ahead	Ran Off Road
200511883	Weather	Road Surface Condition	None	No IMproper Driving	Missing	Other	North	Slowing	Embankment
200501032	Weather	Other	None	No IMproper Driving	Missing	No Control	North	Avoiding Objects in Road	Missing
200711843	None	Road Surface Condition	None	Unsafe Speed	Missing	No Control	North	Out of Control	Fence
200712840	None	None	None	Driver Inattention	Improper Lane Usage/Change	No Control	South	Changing Lanes	Median Barrier
200803669	None	None	None	Unsafe Speed	Missing	No Control	East	Turning Right	Ran Off Road
200803849	None	None	None	Driver Inattention	Missing	No Control	North	Skidding	Missing
200506857	Missing	Unknown	Missing	Missing	Missing	No Control	North	Avoiding Objects in Road	Missing
200508441	Missing	Other	Missing	Missing	Missing	No Control	North	Changing Lanes	Missing
200602386	None	Road Surface Condition	None	Driver Inattention	Unsafe Speed	No Control	North	Straight Ahead	Missing
200605248	None	Missing	None	Driver Inattention	Failure to Yield	No Control	East	Straight Ahead	Missing
200611563	None	None	None	No IMproper Driving	Missing	No Control	South	Straight Ahead	Missing
200612607	Weather	None	None	Unsafe Speed	Missing	No Control	North	Straight Ahead	Overturn
200712768	None	None	None	Failure to Yield	Missing	Stop Sign	North	Turning Right	Missing
200501198	Missing	None	Missing	Missing	Missing	No Control	West	Passing	Missing
200613121	None	Road Surface Condition	None	Following Too Closely	Missing	Officer/Flagman/Guard	South	Slowing	Missing
200602369	Missing	Road Surface Condition	Missing	Missing	Missing	No Control	West	Avoiding Objects in Road	Missing
200909343	None	None	None	Drove Off Road	Missing	No Control	South	Straight Ahead	Overturn
200504721	None	None	None	Other*	Missing	No Control	Unknown	Leaving Traffic Lane	Embankment
200508807	Missing	None	Missing	Missing	Missing	No Control	Unknown	Straight Ahead	Missing
200614790	None	Road Surface Condition	None	No IMproper Driving	Missing	No Control	South	Changing Lanes	Missing
200614735	Weather	Road Surface Condition	None	Unsafe Speed	Missing	No Control	South	Straight Ahead	Missing
200700374	Missing	Obstruction in Roadway	Missing	Missing	Missing	Unknown	South	Avoiding Objects in Road	Missing
200612602	Weather	Road Surface Condition	None	Unsafe Speed	Missing	No Control	North	Out of Control	Overturn
200503864	Missing	Road Surface Condition	Missing	Missing	Missing	Officer/Flagman/Guard	North	Straight Ahead	Missing
200802454	Weather	Road Surface Condition	None	Other*	Missing	No Control	South	Skidding	Median Barrier
200963579	Missing	Debris	Missing	Missing	Missing	No Control	West	Slowing	Missing
200501536	None	None	None	No IMproper Driving	Missing	No Control	South	Straight Ahead	Missing
200505111	Missing	Road Surface Condition	Missing	Missing	Missing	Stop Sign	West	Stopped	Missing
200902587	None	Obstruction in Roadway	None	No IMproper Driving	Missing	No Control	North	Straight Ahead	Missing
200901209	Weather	Other	None	Drove Off Road	Missing	No Control	North	Skidding	Missing
200600084	None	None	None	Driver Inattention	Drove Off Road	No Control	South	Leaving Traffic Lane	Ran Off Road
200602878	Weather	None	None	No IMproper Driving	Missing	No Control	North	Straight Ahead	Ran Off Road
200801876	None	None	Other	Improper Lane Usage/Change	Missing	No Control	South	Changing Lanes	Missing
200703220	None	None	None	Unsafe Speed	Missing	No Control	North	Straight Ahead	Overturn
200962187	None	None	None	Unsafe Speed	Missing	No Control	South	Straight Ahead	Missing

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AccNum	v1TicketCode	v1TicketCode2	v1NonCommConfig	v1CommConfig	v1CommConf2	v1BodyType	v1DamageType	v2TotalOccupants	v2DriverInjStatus
200800575	Speed Too Fast For Conditions		Light Truck (Only 4 Tires)	Null	Null	Null	Totaled	1	Non-Incapacitating
200505316	Speed Too Fast For Conditions		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200506903			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200507521			Passenger Car	Null	Null	Null	Totaled		
200512002			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	1	None
200701995			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200802762			Passenger Car	Null	Null	Null	Totaled		
200806737	Reckless Driving		Light Truck (Only 4 Tires)	Null	Null	Null	Totaled		
200808678			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200813164	Speed Too Fast For Conditions		Passenger Car	Null	Null	Null	Disabling	1	None
200613540			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200608682			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200802537			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200910298			Motorcycle	Null	Null	Null	Totaled	3	None
200807903			Passenger Car	Null	Null	Null	Totaled		
200905940	Alcohol Related/Driving While Intoxicated		Passenger Car	Null	Null	Null	Totaled		
200500931			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	1	None
200511349	Improper Lane Usage / IMproper Lane Change		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	1	None
200711198	Careless Driving		Passenger Car	Null	Null	Null	Totaled		
200710433	Noncausal Violations, e.g., No Insurance, etc.	Fail to Exercise Due Care / Cause Damage to Hwy	Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor	1	None
200803641			Motorcycle	Null	Null	Null	None/Minor		
200808687			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200802888			Other	Null	Null	Null	None/Minor		
200501969			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200505319	Speed Too Fast For Conditions		Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200614557	Fail to Exercise Due Care / Cause Damage to Hwy		Passenger Car	Null	Null	Null	Disabling	2	None
200812780			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200513147	Improper Lane Usage / IMproper Lane Change		Passenger Car	Null	Null	Null	Disabling	1	Not Reported
200902983	Alcohol Related/Driving While Intoxicated		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200513862			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown	1	None
200711243	Failure to Stop For Traffic Control Device		Passenger Car	Null	Null	Null	Totaled	1	None
200709559			Passenger Car	Null	Null	Null	Disabling		
200709754			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200808679			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200812261	Failure to Yield Row After Stop or to Pedestrian		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	1	None
200703490			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown	1	None
200903722			Passenger Car	Null	Null	Null	Disabling	1	None
200512969	Speed Too Fast For Conditions		Passenger Car	Null	Null	Null	None/Minor	1	None
200600125	Failure to Yield Row After Stop or to Pedestrian		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	3	Incapacitating
200701170			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor	3	None
200908466			Passenger Car	Null	Null	Null	Disabling		
200912017			Other	Null	Null	Null	None/Minor	1	None
200601054			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200813470			Passenger Car	Null	Null	Null	Disabling		
200500351	Speed Too Fast For Conditions		Passenger Car	Null	Null	Null	Disabling	1	None
200903721	Speed Too Fast For Conditions		Passenger Car	Null	Null	Null	Disabling	2	None
200705060	Speed Too Fast For Conditions		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	1	Non-Incapacitating
200702041			Passenger Car	Null	Null	Null	Disabling	1	None
200912002	Speed Too Fast For Conditions		Passenger Car	Null	Null	Null	Totaled	2	None
200603139			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown		
200704033			Light Truck (Only 4 Tires)	Null	Null	Null	Totaled		
200800477			Passenger Car	Null	Null	Null	Totaled		
200804485			Passenger Car	Null	Null	Null	Functional		
200805489			Passenger Car	Null	Null	Null	None/Minor		
200903718	Speed Too Fast For Conditions		Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor	1	None
200511883			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200501032			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200711843			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200712840	Fail to Exercise Due Care / Cause Damage to Hwy		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	1	Possible
200803669			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200803849			Passenger Car	Null	Null	Null	Totaled		
200506857			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200508441			Passenger Car	Null	Null	Null	Totaled	2	None
200602386	Speed Too Fast For Conditions	Failure to Wear Safety Belt (Age 16 or Older)	Passenger Car	Null	Null	Null	Disabling	1	None
200605248	Fail to Exercise Due Care / Cause Damage to Hwy		Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	1	None
200611563			Passenger Car	Null	Null	Null	Functional		
200612607			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200712768	Failure to Yield Row After Stop or to Pedestrian		Passenger Car	Null	Null	Null	Functional	1	Not Reported
200501198			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	1	Not Reported
200613121	Following Too Close		Light Truck (Only 4 Tires)	Null	Null	Null	Functional	2	None
200602369			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200909343	Fail to Exercise Due Care / Cause Damage to Hwy		Light Truck (Only 4 Tires)	Null	Null	Null	Totaled		
200504721			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200508807			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	1	None
200614790			Light Truck (Only 4 Tires)	Null	Null	Null	Totaled		
200614735	Alcohol Related/Driving While Intoxicated		Passenger Car	Null	Null	Null	Disabling	1	None
200700374			Passenger Car	Null	Null	Null	None/Minor		
200612602			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200503864			Light Truck (Only 4 Tires)	Null	Null	Null	Totaled		
200802454			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200963579			Passenger Car	Null	Null	Null	Unknown		
200501536			Passenger Car	Null	Null	Null	Functional		
200505111			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown	2	None
200902587			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200901209			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200600084			Passenger Car	Null	Null	Null	Disabling		
200602878			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling	4	None
200801876			Null	Tractor/Semi-Trailer	Null	Cargo Tank	None/Minor	1	Non-Incapacitating
200703220			Passenger Car	Null	Null	Null	Totaled		
200962187	Speed Too Fast For Conditions		Passenger Car	Null	Null	Null	Totaled	1	Non-Incapacitating

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AccNum	v2DriverSafeEquip1	v2DriverSafeEquip2	v2DriverAge	v2DriverSex	2DriverAlcDrugSusp	v2DriverAlcDrugTestGiv	v2DriverBloodAlcCount	v2EnvCirc	v2RdCirc	v2VehCir	v2HumanCirc	v2HumanCirc2
200800575	Lap/Shoulder	Unknown	47	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200505316												
200506903												
200507521												
200512002	Lap/Shoulder	A/Bag Not Dplyp	21	Male	None	Not Given		None	Road Surface Condition	None	No IMproper Driving	Missing
200701995												
200802762												
200806737												
200808678												
200813164	Lap/Shoulder	A/Bag Not Dplyp	33	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200613540												
200608682												
200802537												
200910298	Not Used	A/Bag Not Dplyp	47	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200807903												
200905940												
200500931	Lap/Shoulder	A/Bag Not Dplyp	39	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200511349	Lap/Shoulder	A/Bag Not Dplyp	38	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200711198												
200710433	Lap/Shoulder	A/Bag Not Dplyp	49	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200803641												
200808687												
200802888												
200501969												
200505319												
200614557	Lap/Shoulder	Prp Child Rst	29	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200812780												
200513147	Lap/Shoulder	Unknown	31	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200902983												
200513862	Not Rep	Unknown	49	Unknown	Not Reported	Unknown		Missing	None	Missing	Missing	Missing
200711243	Lap/Shoulder	A/Bag Not Dplyp	57	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200709559												
200709754												
200808679												
200812261	Lap/Shoulder	A/Bag Not Dplyp	57	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200703490	Lap/Shoulder	A/Bag Not Dplyp	19	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200903722	Lap/Shoulder	A/Bag Not Dplyp	55	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200512969	Lap/Shoulder	Unknown	40	Female	None	Not Given		None	None	None	Unsafe Speed	Missing
200600125	Lap/Shoulder	A/Bag Dplyd	43	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200701170	Not Rep	Unknown	21	Unknown	Not Reported	Unknown		Missing	Other	Missing	Missing	Missing
200908466												
200912017	Not Rep	Unknown		Unknown	Not Reported	Unknown		Missing	Road Surface Condition	Missing	Missing	Missing
200601054												
200813470												
200500351	Lap/Shoulder	Unknown	18	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200903721	Lap/Shoulder	A/Bag Not Dplyp	22	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200705060	Lap/Shoulder	Unknown	54	Male	None	Not Given		None	Work Zone	None	No IMproper Driving	Missing
200702041	Lap/Shoulder	A/Bag Not Dplyp	61	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200912002	Not Used	Unknown	23	Male	None	Not Given		Weather	None	None	No IMproper Driving	Missing
200603139												
200704033												
200800477												
200804485												
200805489												
200903718	Lap/Shoulder	Unknown	55	Male	Alcohol	Breath	30	None	None	None	No IMproper Driving	Missing
200511883												
200501032												
200711843												
200712840	Lap/Shoulder	Unknown	34	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200803669												
200803849												
200506857												
200508441	Not Rep	Unknown	39	Unknown	Not Reported	Unknown		Missing	Unknown	Missing	Missing	Missing
200602386	Not Used	Unknown	33	Male	None	Not Given		None	Road Surface Condition	None	No IMproper Driving	Missing
200605248	Lap/Shoulder	Unknown	52	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200611563												
200612607												
200712768	Lap/Shoulder	Unknown	42	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200501198	Not Rep	Unknown		Unknown	Not Reported	Unknown		Missing	None	Missing	Missing	Missing
200613121	Lap/Shoulder	Unknown	49	Male	None	Not Given		None	Road Surface Condition	None	No IMproper Driving	Missing
200602369												
200909343												
200504721												
200508807	Not Rep	Unknown	30	Unknown	Not Reported	Unknown		Missing	None	Missing	Missing	Missing
200614790												
200614735	Lap/Shoulder	Unknown	44	Male	None	Not Given		Weather	None	None	No IMproper Driving	Missing
200700374												
200612602												
200503864												
200802454												
200963579												
200501536												
200505111	Not Rep	Unknown		Unknown	Not Reported	Unknown		Missing	Road Surface Condition	Missing	Missing	Missing
200902587												
200901209												
200600084												
200602878	Lap/Shoulder	Unknown	18	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200801876	Lap/Shoulder	A/Bag Not Dplyp	42	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200703220												
200962187	Lap/Shoulder	A/Bag Not Dplyp	51	Male	None	Not Given		None	None	None	No IMproper Driving	Missing

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AccNum	v2TrafficControlDev	v2TrvDirect	v2ActionPreaction	v2SecEvent	v2TicketCode	v2TicketCode2	v2NonCommConfig	v2CommConfig	v2CommConf2	v2BodyType	v2DamageType	v3TotalOccupants	v3DriverInjStatus
200800575	Other	North	Parked	Missing			Passenger Car	Null	Null	Null	Totaled		
200505316													
200506903													
200507521													
200512002	No Control	North	Changing Lanes	Veh - Angle			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	1	None
200701995													
200802762													
200806737													
200808678													
200813164	No Control	North	Stopped	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200613540													
200608682													
200802537													
200910298	No Control	North	Other*	Other			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	1	None
200807903													
200905940													
200500931	No Control	North	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200511349	No Control	South	Straight Ahead	Seperation of Units			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200711198													
200710433	No Control	South	Straight Ahead	Sideswipe			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown		
200803641													
200808687													
200802888													
200501969													
200505319													
200614557	No Control	South	Straight Ahead	Missing			Passenger Car	Null	Null	Null	Disabling		
200812780													
200513147	No Control	South	Straight Ahead	Seperation of Units			Passenger Car	Null	Null	Null	Disabling		
200902983													
200513862	No Control	Unknown	Changing Lanes	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown		
200711243	No Control	North	Straight Ahead	Veh - Head On			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200709559													
200709754													
200808679													
200812261	No Control	North	Straight Ahead	Ran Off Road			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200703490	No Control	North	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200903722	Officer/Flagman/Guard	North	Stopped	Veh -Rear End			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	2	None
200512969	Other	North	Straight Ahead	Embankment			Light Truck (Only 4 Tires)	Null	Null	Null	Totaled		
200600125	No Control	South	Straight Ahead	Missing			Passenger Car	Null	Null	Null	Disabling		
200701170	No Control	South	Avoiding Objects in Road	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200908466													
200912017	No Control	Unknown	Other*	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown		
200601054													
200813470													
200500351	Other	North	Slowing	Snowberm			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200903721	No Control	North	Slowing	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200705060	Road Const Signs	South	Stopped	Veh -Rear End			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	1	Non-Incapacitating
200702041	No Control	South	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200912002	No Control	North	Stopped	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	2	None
200603139													
200704033													
200800477													
200804485													
200805489													
200903718	No Control	North	Straight Ahead	Ran Off Road			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor		
200511883													
200501032													
200711843													
200712840	No Control	South	Straight Ahead	Median Barrier			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200803669													
200803849													
200506857													
200508441	No Control	North	Slowing	Missing			Passenger Car	Null	Null	Null	Functional		
200602386	No Control	North	Parked	Parked Vehicle			Passenger Car	Null	Null	Null	Functional		
200605248	No Control	North	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		
200611563													
200612607													
200712768	No Control	North	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200501198	No Control	West	Entering Traffic Lane	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200613121	Officer/Flagman/Guard	South	Slowing	Veh -Rear End			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor	1	None
200602369													
200909343													
200504721													
200508807	No Control	Unknown	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown		
200614790													
200614735	No Control	South	Straight Ahead	Ditch			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200700374													
200612602													
200503864													
200802454													
200963579													
200501536													
200505111	Stop Sign	West	Skidding	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Unknown		
200902587													
200901209													
200600084													
200602878	No Control	North	Straight Ahead	Ran Off Road			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200801876	No Control	South	Avoiding Objects in Road	Overturn			Light Truck (Only 4 Tires)	Null	Null	Null	Functional		
200703220													
200962187	No Control	South	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Disabling		

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AccNum	v3DriverSafeEquip1	v3DriverSafeEquip2	v3DriverAge	v3DriverSex	v3DriverAlcDrugSusp	v3DriverAlcDrugTestGiv	v3DriverBloodAlcCount	v3EnvCirc	v3RdCirc	v3VehCir	v3HumanCirc	v3HumanCirc2
200800575												
200505316												
200506903												
200507521												
200512002	Lap/Shoulder	A/Bag Not Dplyp	57	Female	None	Not Given		None	Road Surface Condition	None	No IMproper Driving	Missing
200701995												
200802762												
200806737												
200808678												
200813164												
200613540												
200608682												
200802537												
200910298	Lap/Shoulder	A/Bag Not Dplyp	18	Male	None	Not Given		None	None	None	No IMproper Driving	Missing
200807903												
200905940												
200500931												
200511349												
200711198												
200710433												
200803641												
200808687												
200802888												
200501969												
200505319												
200614557												
200812780												
200513147												
200902983												
200513862												
200711243												
200709559												
200709754												
200808679												
200812261												
200703490												
200903722	Lap/Shoulder	A/Bag Not Dplyp	32	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200512969												
200600125												
200701170												
200908466												
200912017												
200601054												
200813470												
200500351												
200903721												
200705060	Shoulder Only	Unknown	32	Female	None	Not Given		None	None	None	No IMproper Driving	Missing
200702041												
200912002	Lap/Shoulder	Unknown	42	Male	None	Not Given		Weather	None	None	No IMproper Driving	Missing
200603139												
200704033												
200800477												
200804485												
200805489												
200903718												
200511883												
200501032												
200711843												
200712840												
200803669												
200803849												
200506857												
200508441												
200602386												
200605248												
200611563												
200612607												
200712768												
200501198												
200613121	Lap/Shoulder	Unknown	41	Female	None	Not Given		None	Road Surface Condition	None	No IMproper Driving	Missing
200602369												
200909343												
200504721												
200508807												
200614790												
200614735												
200700374												
200612602												
200503864												
200802454												
200963579												
200501536												
200505111												
200902587												
200901209												
200600084												
200602878												
200801876												
200703220												
200962187												

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AccNum	v3TrafficControlDev	v3TrvDirect	v3ActionPreaction	v3SecEvent	v3TicketCode	v3TicketCode2	v3NonCommConfig	v3CommConfig	v3CommConf2	v3BodyType	v3DamageType	Region
200800575												Northern Region
200505316												Northern Region
200506903												Northern Region
200507521												Northern Region
200512002	No Control	North	Straight Ahead	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor	Northern Region
200701995												Northern Region
200802762												Northern Region
200806737												Northern Region
200808678												Northern Region
200813164												Northern Region
200613540												Northern Region
200608682												Northern Region
200802537												Northern Region
200910298	No Control	North	Avoiding Objects in Road	Pedestrian			Passenger Car	Null	Null	Null	Disabling	Northern Region
200807903												Northern Region
200905940												Northern Region
200500931												Northern Region
200511349												Northern Region
200711198												Northern Region
200710433												Northern Region
200803641												Northern Region
200808687												Northern Region
200802888												Northern Region
200501969												Northern Region
200505319												Northern Region
200614557												Northern Region
200812780												Northern Region
200513147												Northern Region
200902983												Northern Region
200513862												Northern Region
200711243												Northern Region
200709559												Northern Region
200709754												Northern Region
200808679												Northern Region
200812261												Northern Region
200703490												Northern Region
200903722	Officer/Flagman/Guard	North	Stopped	Missing			Passenger Car	Null	Null	Null	None/Minor	Northern Region
200512969												Northern Region
200600125												Northern Region
200701170												Northern Region
200908466												Northern Region
200912017												Northern Region
200601054												Northern Region
200813470												Northern Region
200500351												Northern Region
200903721												Northern Region
200705060	Road Const Signs	South	Stopped	Veh -Rear End			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	Northern Region
200702041												Northern Region
200912002	No Control	North	Skidding	Sideswipe			Light Truck (Only 4 Tires)	Null	Null	Null	None/Minor	Northern Region
200603139												Northern Region
200704033												Northern Region
200800477												Northern Region
200804485												Northern Region
200805489												Northern Region
200903718												Northern Region
200511883												Northern Region
200501032												Northern Region
200711843												Northern Region
200712840												Northern Region
200803669												Northern Region
200803849												Northern Region
200506857												Northern Region
200508441												Northern Region
200602386												Northern Region
200605248												Northern Region
200611563												Northern Region
200612607												Northern Region
200712768												Northern Region
200501198												Northern Region
200613121	Officer/Flagman/Guard	South	Slowing	Missing			Light Truck (Only 4 Tires)	Null	Null	Null	Functional	Northern Region
200602369												Northern Region
200909343												Northern Region
200504721												Northern Region
200508807												Northern Region
200614790												Northern Region
200614735												Northern Region
200700374												Northern Region
200612602												Northern Region
200503864												Northern Region
200802454												Northern Region
200963579												Northern Region
200501536												Northern Region
200505111												Northern Region
200902587												Northern Region
200901209												Northern Region
200600084												Northern Region
200602878												Northern Region
200801876												Northern Region
200703220												Northern Region
200962187												Northern Region

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AccNum	Borough	Census Area	Election District	City	Police Detach	NHS	AHS	Functional Class	Rural/Urban	Ownership (Maint. Resp.)
200800575	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200505316	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200506903	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200507521	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200512002	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200701995	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200802762	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200806737	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200808678	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200813164	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200613540	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200608682	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200802537	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200910298	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200807903	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200905940	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200500931	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200511349	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200711198	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200710433	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200803641	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200808687	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200802888	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200501969	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200505319	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200614557	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200812780	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200513147	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200902983	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200513862	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200711243	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200709559	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200709754	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200808679	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200812261	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200703490	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200903722	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200512969	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200600125	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200701170	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200908466	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200912017	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200601054	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200813470	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200500351	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200903721	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200705060	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200702041	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200912002	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200603139	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200704033	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200800477	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200804485	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200805489	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200903718	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200511883	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200501032	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200711843	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200712840	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200803669	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200803849	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200506857	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200508441	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200602386	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200605248	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200611563	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200612607	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200712768	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200501198	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200613121	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200602369	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200909343	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200504721	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 11	Non City Area	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200508807	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200614790	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200614735	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200700374	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200612602	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200503864	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200802454	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200963579	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200501536	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200505111	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200902587	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200901209	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200600084	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200602878	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200801876	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200703220	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency
200962187	Fairbanks North Star Borough	Fairbanks North Star Boro Census Area	House District 10	Fairbanks City	Detachment E	NHS Not Intermodal	Not AHS	Urban Interstate	Urbanized (Pop 50,000 to 199,999)	State Highway Agency

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Report Date: 1
Expanded Acc
CDS Number:
From Milepoi
Route Descrip
extracted fron

AccNum	Paved/Unpaved	Maintenance Station	Maintenance Category
200800575	Paved	Fairbanks Station	Category I All Year
200505316	Paved	Fairbanks Station	Category I All Year
200506903	Paved	Fairbanks Station	Category I All Year
200507521	Paved	Fairbanks Station	Category I All Year
200512002	Paved	Fairbanks Station	Category I All Year
200701995	Paved	Fairbanks Station	Category I All Year
200802762	Paved	Fairbanks Station	Category I All Year
200806737	Paved	Fairbanks Station	Category I All Year
200808678	Paved	Fairbanks Station	Category I All Year
200813164	Paved	Fairbanks Station	Category I All Year
200613540	Paved	Fairbanks Station	Category I All Year
200608682	Paved	Fairbanks Station	Category I All Year
200802537	Paved	Fairbanks Station	Category I All Year
200910298	Paved	Fairbanks Station	Category I All Year
200807903	Paved	Fairbanks Station	Category I All Year
200905940	Paved	Fairbanks Station	Category I All Year
200500931	Paved	Fairbanks Station	Category I All Year
200511349	Paved	Fairbanks Station	Category I All Year
200711198	Paved	Fairbanks Station	Category I All Year
200710433	Paved	Fairbanks Station	Category I All Year
200803641	Paved	Fairbanks Station	Category I All Year
200808687	Paved	Fairbanks Station	Category I All Year
200802888	Paved	Fairbanks Station	Category I All Year
200501969	Paved	Fairbanks Station	Category I All Year
200505319	Paved	Fairbanks Station	Category I All Year
200614557	Paved	Fairbanks Station	Category I All Year
200812780	Paved	Fairbanks Station	Category I All Year
200513147	Paved	Fairbanks Station	Category I All Year
200902983	Paved	Fairbanks Station	Category I All Year
200513862	Paved	Fairbanks Station	Category I All Year
200711243	Paved	Fairbanks Station	Category I All Year
200709559	Paved	Fairbanks Station	Category I All Year
200709754	Paved	Fairbanks Station	Category I All Year
200808679	Paved	Fairbanks Station	Category I All Year
200812261	Paved	Fairbanks Station	Category I All Year
200703490	Paved	Fairbanks Station	Category I All Year
200903722	Paved	Fairbanks Station	Category I All Year
200512969	Paved	Fairbanks Station	Category I All Year
200600125	Paved	Fairbanks Station	Category I All Year
200701170	Paved	Fairbanks Station	Category I All Year
200908466	Paved	Fairbanks Station	Category I All Year
200912017	Paved	Fairbanks Station	Category I All Year
200601054	Paved	Fairbanks Station	Category I All Year
200813470	Paved	Fairbanks Station	Category I All Year
200500351	Paved	Fairbanks Station	Category I All Year
200903721	Paved	Fairbanks Station	Category I All Year
200705060	Paved	Fairbanks Station	Category I All Year
200702041	Paved	Fairbanks Station	Category I All Year
200912002	Paved	Fairbanks Station	Category I All Year
200603139	Paved	Fairbanks Station	Category I All Year
200704033	Paved	Fairbanks Station	Category I All Year
200800477	Paved	Fairbanks Station	Category I All Year
200804485	Paved	Fairbanks Station	Category I All Year
200805489	Paved	Fairbanks Station	Category I All Year
200903718	Paved	Fairbanks Station	Category I All Year
200511883	Paved	Fairbanks Station	Category I All Year
200501032	Paved	Fairbanks Station	Category I All Year
200711843	Paved	Fairbanks Station	Category I All Year
200712840	Paved	Fairbanks Station	Category I All Year
200803669	Paved	Fairbanks Station	Category I All Year
200803849	Paved	Fairbanks Station	Category I All Year
200506857	Paved	Fairbanks Station	Category I All Year
200508441	Paved	Fairbanks Station	Category I All Year
200602386	Paved	Fairbanks Station	Category I All Year
200605248	Paved	Fairbanks Station	Category I All Year
200611563	Paved	Fairbanks Station	Category I All Year
200612607	Paved	Fairbanks Station	Category I All Year
200712768	Paved	Fairbanks Station	Category I All Year
200501198	Paved	Fairbanks Station	Category I All Year
200613121	Paved	Fairbanks Station	Category I All Year
200602369	Paved	Fairbanks Station	Category I All Year
200909343	Paved	Fairbanks Station	Category I All Year
200504721	Paved	Fairbanks Station	Category I All Year
200508807	Paved	Fairbanks Station	Category I All Year
200614790	Paved	Fairbanks Station	Category I All Year
200614735	Paved	Fairbanks Station	Category I All Year
200700374	Paved	Fairbanks Station	Category I All Year
200612602	Paved	Fairbanks Station	Category I All Year
200503864	Paved	Fairbanks Station	Category I All Year
200802454	Paved	Fairbanks Station	Category I All Year
200963579	Paved	Fairbanks Station	Category I All Year
200501536	Paved	Fairbanks Station	Category I All Year
200505111	Paved	Fairbanks Station	Category I All Year
200902587	Paved	Fairbanks Station	Category I All Year
200901209	Paved	Fairbanks Station	Category I All Year
200600084	Paved	Fairbanks Station	Category I All Year
200602878	Paved	Fairbanks Station	Category I All Year
200801876	Paved	Fairbanks Station	Category I All Year
200703220	Paved	Fairbanks Station	Category I All Year
200962187	Paved	Fairbanks Station	Category I All Year

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APPENDIX C

CATEGORICAL EXCLUSION

State of Alaska Department of Transportation & Public Facilities Statewide
Design & Engineering Services

CATEGORICAL EXCLUSION DOCUMENTATION FORM

Project Name: Richardson Hwy MP 353-357 Access Improvements
Project Number (state/federal): 66148/HRO-0A2-4(19)

Date: May 4, 2009

I. Purpose of Project

The purpose of this project is to increase safety on this four-lane high-speed/high-traffic volume section of the Richardson Highway.

II. Project Description

This project would improve access and traffic flow along a 2.75-mile segment of the Richardson Highway.

The project is located in Sections 27, 28, 34, 35, T1S, R1E, USGS Fairbanks D-2 SE and Section 35, T1S, R1E; USGS Fairbanks D-1 SW. Figure 1 shows the project location and vicinity. Please note that some agency coordination correspondence attached to this document reference this project as milepost 354 to 357 while others reference it as milepost 353 to 357. The project beginning point falls between mileposts 353 and 354. The difference represents two interpretations of the beginning point rather than any change in project termini. The actual project termini have consistently been depicted in all correspondence at the following coordinates: Begin – Lat. 64°47'13"N, Long. -147°30'43"W (NAD83); End – Lat. 64°46'51"N, Long. -147°29'32"W (NAD83). The official project name is Richardson Highway MP 353 to 357 Access Improvements. Highway mileposts in relation to project termini are shown on Figures 2 and 3.

The project would involve upgrades to approximately 1 mile of the existing highway and 2.2 miles of existing frontage roads. Approximately 1.3 miles of new road would be constructed in the form of new intersections and extended frontage roads. Project elements include; 1) reducing the number of direct access points by closing access at seven intersections and limiting access at one intersection; 2) consolidating access at two new intersections; 2) upgrading, paving, and/or extending frontage roads, 3) adding turn lanes and acceleration lanes at intersections, and 4) illuminating the two newly constructed intersections. The frontage road improvements and interconnection would provide for increased use as a secondary roadway for purposes of highway access. A detailed project description is located in Appendix A. Figure 2 shows the proposed work elements.

III. Environmental Consequences

Complete the following. For each yes, summarize the activity evaluated and the magnitude of the impact and the potential for significant impact based on context and intensity. An alternatives analysis (e.g. Avoidance and Minimization Checklist) is required for any consequence category with an asterisk (*). Summarize impacts in this form with detailed analysis attached as appropriate.

A. Right-of-Way Impacts	N/A	YES	NO
1. Additional right-of-way required.	☐	☒	☐
a. Permanent easements required.	☐	☐	☒

Estimated number of parcels: N/A

b.	Full or partial property acquisition required. Estimated number of parcels: 20	☐	☒	☐
c.	Property transfer from state or federal agency required. List agencies in No. 3 below.	☐	☐	☒
d.	Business or residential relocations required. If yes, summarize the findings of the conceptual stage relocation study in No. 3, below and attach the conceptual relocation study. No. of relocations: none Type of relocation: Residential: ☐ Business: ☐ Residential (Indicate number: none) Business (Indicate number: none)	☐	☐*	☒
e.	Last-resort housing required.	☐	☐	☒
2.	Low-income and minority populations are disproportionately high and adversely affected by the project as defined in E.O. 12898 (DOT Order 6640.23, December 1998).	☐	☐	☒

3. Summarize impact.

An estimated 13.3 acres of additional right-of-way from approximately 20 parcels would be required to for frontage road and cul-de-sac work (3 acres) and new intersections (10.3 acres).

B. Social Impacts	N/A	YES	NO
1. The project will affect neighborhoods or community cohesion.	☐	☐	☒
2. The project will affect travel patterns and accessibility (e.g. vehicular, commuter, bicycle, or pedestrian).	☐	☒	☐
3. The project will affect school boundaries, recreation areas, churches, businesses, police and fire protection, etc. Include the direct and indirect impacts from the displacement of businesses in the analysis.	☐	☒	☒
4. The project will adversely affect the elderly, handicapped, nondrivers, transit-dependent, minority and ethnic groups, or the economically disadvantaged.	☐	☐	☒

5. Summarize impacts, if any.

Some users may need to drive between 0.10 and 0.71 miles on the frontage roads to access their property from the highway, instead of using direct access as currently allowed. Improvements to accessibility include upgraded and extended frontage roads, improved intersection spacing, closer intersection proximity for some users, reduced intersection congestion, nearby full-access intersections to replace existing partial-access intersections, safer intersection design. No businesses would be displaced.

C. Economic Impacts	N/A	YES	NO
1. The project will have economic impacts on the regional and/or local economy, such as effects on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales.	☐	☒	☐
2. The project will affect established businesses or business districts.	☐	☒	☐

C. Economic Impacts

	N/A	YES	NO

3. Summarize impacts, if any.

Some businesses, which currently experience direct access to the highway, may need to take several minutes longer to access the highway via the new frontage roads. Accessibility to most of the area and the primary local businesses would be improved, due to the upgraded and extended frontage roads, closer intersections for some businesses, reduced intersection congestion, nearby full-access intersections to replace existing partial-access intersections, and safer intersection design for businesses and their customers.

D. Local Land Use and Transportation Plan

	N/A	YES	NO
1. Project is consistent with local land use plan.	☐	☒	☐
2. Project is consistent with local transportation plan.	☐	☒	☐
3. Project would induce adverse secondary and cumulative effects.	☐	☐	☒

4. Summarize any adverse effect on the local transportation and land use plan, including secondary and cumulative effects.

New intersection development, frontage road extension work, and new cul-de-sac work is expected to require right-of-way acquisition. The existing surrounding land use is primarily commercial with scattered residences and subdivisions. No significant change of land use is expected to result from the project's proposed conversion of land to roadway from current use.

E. Impacts to Historic Properties

	N/A	YES	NO
1. National Register-listed or eligible properties are in area of potential effect. If yes, consult with FHWA.	☐	☐	☒
2. There will be an adverse effect on a historic property. *If yes, consult with FHWA, summarize alternatives evaluated, attach SHPO correspondence, and attach signed MOA).*	☐	☐*	☒
3. This project would have no potential to cause effect to historic properties. *This project does meet the criteria for no formal review under Section 106 of the National Historic Preservation Act [36 CFR 800.3(a)(1)] per the May 2, 2006 determination by the Alaska Division of FHWA. If yes, note applicability in number 4 below or attach email from the FHWA. Attach SHPO and other appropriate correspondence as appropriate.*	☐	☐	☒

4. Summarize impacts to historic properties.

On 4/7/2009 the State Historic Preservation Officer concurred with FHWA's finding that no historic properties would be affected by this project. See letter with stamped concurrence in Appendix B.

F. Wetlands Impacts

	N/A	YES	NO
1. Project involves wetlands as defined by the U.S. Army Corps of Engineers (USACE). *If yes, document public and agency coordination required per E.O. 11990, Protection of Wetlands.*	☐	☒*	☐
2. Wetlands delineated in accordance with DOT&PF/FHWA/USACE 1992 Permit Accord.	☐	☒	☐

F. Wetlands Impacts

	N/A	YES	NO

3. Estimated area of involvement (i.e. acres): 0.5 acres
4. Estimated fill quantities (cubic yards): 3,500 cubic yards
5. Estimated dredge quantities (cubic yards): 900 cubic yards
6. USACE authorization anticipated: None ☐
   Type: NWP ☒ Individual ☐ Other ☐
7. Summarize wetlands impacts and attach following supporting documentation as appropriate:

   - Avoidance and Minimization Checklist.
   - Wetlands Delineation.
   - Jurisdictional Determination.
   - Copies of public and resource agency letters received in response to the request for comments.

   Wetlands impacts are as follows:

Potential wetland impacts are associated with the proposed frontage road crossing of the existing man-made flood channel (Fairbanks North Star Borough Flood Control Channel B), remnant slough channels, and scattered depressions. Overall impacts are not expected to exceed 0.5 acres. A Wetlands and Waters summary is located in Appendix C. Prior to construction the appropriate permit approval would be obtained from the Corps of Engineers for any impacts to waters of the U.S. A nationwide permit is anticipated; otherwise an individual permit would be obtained if needed.

		N/A	YES	NO
8.	Wetlands Finding:			
	a. Are there practicable alternatives to the proposed construction in wetlands? *If yes, the project cannot be approved as proposed.*	☐	☐	☒
	b. Does the project include all practicable measures to minimize harm to wetlands? *If no, the project cannot be approved as proposed.* List any commitments and mitigative measures in Section VII.	☐	☒	☐
	c. Only practicable alternative: Based on the evaluation of avoidance and minimization alternatives, there are no practicable alternatives that would avoid the project's impacts on wetlands. The project includes all practicable measures to minimize harm to the affected wetlands as a result of construction. *If no, the project cannot be approved as proposed.*	☐	☒	☐

G. Fish and Wildlife

		N/A	YES	NO
1.	Anadromous or resident fish habitat.			
	a. Adverse effect on spawning habitat.	☐	☒*	☐
	b. Adverse effect on rearing habitat.	☐	☒*	☐
	c. Adverse effect on migration corridors.	☐	☐*	☒
	d. Adverse effect on subsistence species.	☐	☐*	☒
2.	Essential Fish Habitat (EFH).			
	a. EFH present in project area.	☐	☐	☒

G. Fish and Wildlife	N/A	YES	NO
b. Project proposes construction in EFH. *If yes describe EFH impacts in Section G, No. 5.*	☐	☐	☒
c. Project may adversely affect EFH. *If yes, attach EFH Assessment.*	☐	☐*	☒
d. Project includes conservation recommendations proposed by NOAA Fisheries. If no, formal notification must be made to NOAA Fisheries. (Summarize the final conservation measures in No. 5 and list in Section VII).	☒	☐	☐
3. Wildlife Resources (game/subsistence species):			
a. Project is in area of high wildlife/vehicle accidents.	☐	☐	☒
b. Project would bisect migration corridors.	☐	☐	☒
c. Project would segment habitat.	☐	☐	☒
d. Project would adversely affect species of concern to Alaska Department of Fish and Game (ADF&G). *If yes, attach appropriate documentation from ADF&G that demonstrates the project would not result in significant adverse impacts.*	☐	☐*	☒
4. Bald Eagle and Golden Eagle Protection Act			
a. Project slope limits are within 660 feet of eagle nesting tree. *If yes, consult USF&WS and attach documentation of consultation.*	☐	☐*	☒
b. Project would adversely affect eagles or their nests. *If yes, project cannot be approved as proposed.*	☐	☐*	☒

5. Summarize adverse fish and wildlife impacts.

This project includes the extension of existing culverts conveying waters of Fairbanks North Star Borough (FBNB) Flood Control Channel B under the Richardson Highway in the on the east end of the project (Figures 3 and 4). The frontage road extension would cross the channel, requiring a 100-foot extension of the culverts. The channel joins the Chena River northwest of the project area. The channel is not listed in the *Atlas to the Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes* as having anadromous fish. The National Fisheries Marine Service has reviewed the project and concluded the project would result in no adverse effect to essential fish habitat. NFMS's 2/7/2006 e-mail response is located in Appendix E. The Alaska Department of Fish and Game (ADFG) has commented that resident fish are present and a Fish Habitat Permit would be needed. ADFG's 4/21/2009 and 1/17/2006 e-mail responses are located in Appendix E.

H. Threatened and Endangered Species (T&E)	N/A	YES	NO
1. Listed threatened or endangered species present.	☐	☐	☒
2. Threatened or endangered species migrate through the project area.	☐	☒	☒
3. Proposed species present in project area.	☐	☐	☒
4. Candidate species present in project area.	☐	☐	☒
5. Project not likely to adversely affect T&E species. *If yes, go to Section I.*	☐	☐	☒
6. Project may adversely affect T&E species. *If yes, attach biological assessment and the appropriate documentation from agency with jurisdiction.*	☐	☐*	☒
7. Project would jeopardize a T&E species. *If yes the project cannot be approved as proposed.*	☐	☐*	☒

8. Summarize the findings of the biological assessment and the opinion of the agency with jurisdiction.

The project would have **no effect** on threatened or endangered species. None are located within 1 mile.

I. **Water Body Involvement**	N/A	YES	NO
1. Project affects a water body.	☐	☒*	☐
2. Project affects a navigable water body as defined by USCG, (i.e. Section 9).	☐	☐*	☒
3. Project affects Waters of the U.S. (as defined by the Corps), Section 404.	☐	☒*	☐
4. Project affects Navigable Waters of the U.S. (as defined by the Corps) Section 10.	☐	☐*	☒
5. Project affects a resident fish stream (i.e. A.S. 41.14.840)	☐	☒	☐
6. Project affects a cataloged anadromous fish stream (i.e. A.S. 41.14.870).	☐	☐*	☒
7. Project affects a designated Wild and Scenic River or land adjacent to a Wild and Scenic River. *If yes, Regional Environmental Coordinator must consult with the FHWA Environmental Program Manager to determine applicability of Section 4(f).*	☐	☐	☒

8. Proposed river or stream involvement: Bridge ☐ Culvert ☒ Embankment Fill ☒ Relocation ☐ Diversion ☐ Temporary ☐ Permanent ☒ N/A ☐
9. Type of stream or river habitat impacted: Spawning Rearing ☐ Pool ☐ Riffle ☐ Undercut bank ☐ N/A ☒
10. Amount of fill below: OHW 3,500 cu.yds. MHW _____ HTL _____
11. Summarize impacts:

The three existing 60-inch culverts in the FBNB Flood Control Channel B would need to be extended under the new frontage Road. The channel in this area is typically dry during the summer, fall, and winter months but is being treated as a water of the U.S. together with any adjacent wetland fringe.

J. **Alaska Coastal Management Program (ACMP)**	N/A	YES	NO
1. Project is within the Alaska Coastal Management Program boundary.	☐	☐	☒
2. Project is within a local coastal management district. *If yes, consult with the local coastal management official and attach correspondence.*	☐	☐	☒
3. Project is consistent with local and state coastal management plans. *If no, the project cannot be approved as proposed.*	☒	☐	☐

4. Finding:

The project area is not located within any coastal management zone boundaries.

K. **Hazardous Waste (HW)**	N/A	YES	NO
1. There are known or potentially contaminated sites along the corridor.	☐	☒	☐
2. The existing and/or proposed ROW is contaminated.	☐	☒	☐
3. Extensive excavation is proposed adjacent to, or within, a known HW site.	☐	☐*	☒
4. Potential for encountering hazardous waste during construction is high.	☐	☐	☒

5. Summarize impacts of any yes marked in 1-4 and attach appropriate HW investigation report.

A review of the Alaska Department of Environmental Conservation contaminated site database was completed on April 14, 2009. The following sites were identified in the vicinity of the project. 1. Denny Properties (100.38.111); 2. Tri-tech Automotive (100.38.042); 3. Environmental Systems, Inc. (100.38.073); 4. Six-Mile Truck Shop (100.38.078); 5. AKA Mat-Su, Inc. Spill (100.38.103). After reviewing the status of each site and the proposed work in the area it was concluded that the project is not expected to acquire property with contaminated soils or a contamination source and is not expected to encounter contamination as a result of project

excavation near any of the sites. A TCE groundwater plume with a source distant from the right-of-way occurs 100 feet deep below the highway right-of-way on the north end of the project but is not expected to be encountered.

L. **Air Quality (Conformity)**	N/A	YES	NO
1. The project is located in an air quality maintenance area or nonattainment area (CO or PM-10). *If yes,* indicate CO ☐ or PM-10 ☐ and complete the remainder of this section. *If no, continue to next section.*	☐	☐	☒
2. If applicable, the project is included in a conforming Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP) (state dates of FHWA/FTA conformity determination). Date:	☒	☐	☐
3. The project is exempt from an air quality analysis per 40 CFR 93.126 (Table 2 and Exempt Projects). *If yes, continue to next section. If no, complete the remainder of this section. Note: A project-level air quality conformity analysis is required for CO nonattainment and maintenance areas and a qualitative project-level analysis is required for PM-10 nonattainment and maintenance areas.*	☒	☐	☐
4. Have there been any significant changes in the design, concept, and/or scope as discussed in the most recent conforming TIP and LRTP? *If yes, describe changes in No. 7. In addition, the project must satisfy the conformity rule's requirements for projects not from a plan and TIP, or the plan and TIP must be modified to incorporate the revised project (including a new conformity analysis).*	☒	☐	☐
5. If required, a CO project-level analysis was completed meeting the requirements of Section 93.123 of the conformity rule. The results satisfy the requirements of Section 93.116(a) for maintenance areas or 93.116(b) for nonattainment areas. *Attach a copy of the analysis.*	☒	☐	☐
6. If required, a PM-10 project-level air quality analysis was completed meeting the requirements of Section 93.123 of the conformity rule. The results satisfy the requirements of Section 93.116(a). (The thresholds are different for PM-10 than they are for CO). *Attach a copy of the analysis.*	☒	☐	☐
7. Summarize air quality impacts:			

M. **Floodplains Impacts (23 CFR Part 650, Subpart A)**	N/A	YES	NO
1. Project encroaches longitudinally into the 100-year floodplain (i.e. base floodplain in fresh or marine waters). *If yes, public comments on the action must be requested and comments received attached. Summarize the findings and attach the "Location Hydraulic Study" developed per 23CFR 650.111.*	☐	☐	☒
2. Project encroaches into a regulatory floodway. *If yes attach the location hydraulic study.*	☐	☐*	☒
3. The proposed action would increase the base flood elevation one-foot or greater. *If yes attach the location hydraulic study.*	☐	☐	☒
4. The encroachment is significant as defined by 23CFR 650.105. *If yes, the project cannot be approved as proposed without a finding that the proposed action is the "Only Practicable Alternative" as defined in 23 CFR 650.113. Attach the finding for FHWA approval.*	☐	☐	☒

M. Floodplains Impacts (23 CFR Part 650, Subpart A)	N/A	YES	NO
5. Project conforms to local flood hazard ordinances. *If no, consult with FHWA.*	☒	☐	☐
6. Project is consistent with E.O. 11988 (Floodplain Protection). If no the project cannot be approved as proposed.	☒	☐	☐

7. Summarize risk and adverse floodplain impacts:

According to the Federal Emergency Management Agency's *Flood Insurance Rate Map* (Panel #025009 0203 G) the majority of the proposed project does not encroach into the 100-year floodplain. A small portion of the project at the New Bethany Intersection falls within an isolated Special Flood Hazard Area Inundated by 100-year Flood, with no base flood elevation determined (Zone A). Two scoping letters were sent out on January 9, 2006 and June 21, 2006 and two public meetings were held on February 21, 2006 and May 10, 2006 to gather comments from the public and agencies. No comments concerning floodplains were received in response. The project would not affect an established base flood elevation or a regulatory floodway.

N. Noise Impact (23 CFR Part 772)	N/A	YES	NO
1. There are noise-sensitive receivers/land uses adjacent to the proposed project. *If yes attach the noise analysis, if applicable. If no, go to section "O".*	☐	☒	☐
Category A: There are adjacent lands where serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.	☒	☐	☐
Category B: There are adjacent picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, hotels, motels, schools, churches, libraries, or hospitals.	☐	☒	☐
Category C: There are adjacent developed lands, properties, or activities not included in categories A or B above. *This would include commercial properties.*	☐	☒	☐
2. The project is located on new location, would result in substantial changes in vertical or horizontal alignment, or would increase the number of through lanes. *If yes, a noise analysis is required. If not, go to Section O.*	☐	☐	☒
3. There is an existing noise impact.	☒	☐	☐
4. The project would create a noise impact.	☒	☐	☐
5. Noise analysis demonstrates potential noise impacts.	☒	☐	☐
6. There are feasible and reasonable measures that can reduce noise impacts.	☒	☐	☐
7. The noise abatement measures listed in 23 CFR 772.13(c)(1-5) have been considered for those receivers where a noise impact would occur.	☒	☐	☐

8. Summarize noise impact and abatement measures considered, if applicable.

O. Water Quality Impact	N/A	YES	NO
1. Project would involve a public or private drinking source. *If yes, explain in no. 7.*	☐	☐	☒
2. Project would result in a discharge of storm water to a Waters of the U.S.	☐	☐	☒
3. Project would discharge storm water into or affect an ADEC designated impaired water body. *If yes, list in no. 4 and describe in no. 7.*	☐	☐	☒

O. Water Quality Impact

	N/A	YES	NO
4. List name(s) and location(s).			
5. Estimate the acreage of ground-disturbing activities that will result from the project? 20 acres			
6. Is there a municipal separate storm sewer system (MS4) NPDES permit, or will runoff be mixed with discharges from an NPDES permitted industrial facility? If yes, NPDES permit #: AKS-053406	☐	☒	☐
7. Summarize the impacts of any "yes" marked in Section O.			

No storm water discharges outside of storm water runoff are proposed. Storm water runoff may leave the site and flow to down-gradient waters of the U.S. Best management practices will be implemented for the purpose of meeting state and federal water quality standards. A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented by the construction contractor. A SWPPP will comply with the National Pollution Discharge Elimination System (NPDES) General Permit for Construction Activities. Any necessary review and approvals will be obtained from the Alaska Department of Environmental Conservation (ADEC) to ensure conformance to the existing areas-wide permit for water quality standards, EPA MS4 #AKS-053406.

P. Permits and Authorizations

	N/A	YES	NO
1. Corps, Section 404/10	☒	☒	☐
2. Coast Guard, Section 9	☐	☐	☒
3. Department of Natural Resources (DNR), Fish Habitat Permit (T41.870 and .840)	☐	☒	☐
4. Flood Hazard	☐	☐	☒
5. Department of Environmental Conservation (ADEC) Non-domestic Wastewater Plan Approval.	☐	☐	☒
6. ADEC 401	☐	☒	☐
7. DNR, ACMP consistency	☐	☐	☒
8. Other. *If yes, list.*	☐	☒	☐

A Fairbanks North Star Borough floodplain permit would be applied for as necessary.

IV. Construction Impacts

	N/A	YES	NO
1. There will be temporary degradation of water quality.	☐	☒	☐
2. There will be temporary stream diversion.	☐	☒	☐
3. There will be temporary degradation of air quality.	☐	☒	☐
4. There will be temporary delays and detours of traffic.	☐	☒	☐
5. There will be temporary impact on businesses.	☐	☒	☐
6. There will be other construction impacts, including noise.	☐	☐	☐
7. Summarize construction impacts associated with any "yes" in Section IV.			

There would be minor, temporary localized environmental impacts during construction. The extension of the FBNB Flood Control Channel B culverts would require diversion of any water present in the channel. This activity has the potential for temporary degradation of water quality. Necessary measures would be taken to minimize the input of sediment into water bodies and wetlands during construction for the purpose of meeting state and federal water quality standards. The contractor would be required to prepare and maintain a Storm Water Pollution Prevention Plan. Temporary and localized reductions of air quality may occur in the vicinity of construction equipment. During construction, traffic on the frontage roads may be detoured, and traffic on the highway may be delayed. The delayed or detoured traffic may have a temporary negative access impacts on local businesses. Operation of construction equipment would result in a temporary increase in noise in the area. Temporary construction impacts are not expected to be substantial and are expected to be outweighed by the long-term safety and traffic flow benefits of the proposed improvements.

V. Section 4(f)/6(f)	N/A	YES	NO
1. Section 4(f) properties would be affected by the proposed action.	☐	☐	☒
2. There would be a "use" of any land from these 4(f) properties.	☐	☐	☒
3. The project would affect Section 6(f) properties.	☐	☐	☒
4. Funds from the Land and Water Conservation Fund Act (LWCFA) were used for improvement to the 4(f) property.	☒	☐	☐
5. Is the use of the property receiving LWCFA funds a "conversion of use" per Section 6(f) of the LWCFA? *Attach the correspondence received from the ADNR 6(f) Grants Administer. If yes, consult with FHWA.*	☐	☐	☒
6. Project is adjacent to a Section 4(f) resource. *If yes, consult with the FHWA Environmental Programs Manager to determine applicability of "constructive use".*	☐	☐	☒

7. Summarize the type of involvement. Coordinate with the land manager and attach appropriate documentation (i.e. Section 4(f) or Section 6(f) Evaluation).

This project involves no use of Section 4(f) or Section 6(f) property.

VI. Comments and Coordination	N/A	YES	NO
1. Public/agency involvement for project *(required if protected resources are involved).*	☐	☒	☐
2. Meetings	☐	☒	☐
3. Newspaper ads Name of newspaper: Fairbanks Daily News Miner	☐	☒	☐
4. Scoping letters	☐	☒	☐
5. Scoping meeting	☐	☐	☒
6. Field review	☐	☐	☒

7. Summarize comments and coordination efforts for this project. Discuss pertinent issues raised during public and agency scoping and public meetings. *Attach agency correspondence that demonstrates coordination and that there are no unresolved issues.*

Public meetings were held on February 21, 2006 and May 10, 2006 to evaluate the public's concerns on this project. Newspaper advertisements were published in the Fairbank Daily News Miner to advertise for the public meetings. The advertisements are attached in Appendix D. Scoping letters were sent to the Agencies on January 9, 2006 and June 21, 2006. Agency and public comments are summarized below. The scoping letters and agency written comments are attached in Appendix E in the order presented in the summary table below.

Date Rec'd	Agency	Summary of Agency Comments	Resolution
4/21/09	AK DFG	Resident fish species are present in FBNB flood control channel B and a fish permit would be required for culvert extensions.	DOT&PF would apply for and obtain an AK DFG fish habitat permit prior to construction.
2/18/09	USFWS	No records of raptor nests within 2 miles of the project. If a raptor nest is discovered within one-quarter mile of the project, disturbances should be avoided between April 15 and August 1.	If a raptor nest is discovered the proposed timing restriction would be followed unless though further coordination with USFWS another option is allowed.
7/17/06	USFWS	Requested for updated wetland assessment in permitting phase.	Preliminary wetland review is completed. Final delineation during permit phase.
		Recommended mitigation for losses.	Mitigation to be proposed in permit phase.
		Recommended that clearing, excavation, and fill activities be completed prior to May 1 or after July 15 or other measures to avoid impacts to migratory birds.	Avoidance measures would be implemented.
7/10/06	USACE	Stated that proposed project is subject to Corps jurisdiction.	DOT&PF would apply for and obtain the appropriate Corps permit prior to construction.
2/22/06	FBNB Planning	Recommended shifting the Old Richardson Highway access point to Rozak Road.	The Old Richardson Highway access would be closed and shifted to Rozak Rd.
2/16/06	AK DEC	Provided maps of contaminated sites in vicinity.	Sites noted.
2/7/06	USFWS	The Service does not expect project-related activities to adversely affect bald eagles.	No resolution needed.
		There are no threatened or endangered species in the project area.	No resolution needed.
		Request for updated wetland assessment in permitting phase.	Preliminary wetland review is completed. Final delineation during permit phase.
		Consider ways to mitigate wetland losses.	Mitigation to be proposed in permit phase.
2/7/06	NMFS	No adverse effect to Essential Fish Habitat. No EFH Assessment or conservation measures required. No further consultation. No objection.	No resolution needed.
1/26/06	USACE	Stated that proposed project is subject to Corps jurisdiction.	DOT&PF would apply for and obtain the appropriate Corps permit prior to construction.
1/23/06	Golden Valley Electric	GVEA stated no objection with project. Noted that they had electric facilities the entire length that would need to be addressed.	DOT&PF Utilities Section would work with GVEA to address GVEA utilities as needed.
1/19/06	USDA-NRCS	No comment concerning project.	No resolution needed.
1/19/06	FBNB Public Works	The proposed improvements should not cause a problem with drainage channel-B. Public Works requests that DOT&PF provide/extend thawing equipment within the new culvert sections.	DOT&PF would address as needed.
1/17/06	AK DNR	The flood channel is known to support Arctic grayling and likely other resident fish. A Fish Habitat permit is required.	DOT&PF would apply for and obtain an AK DFG fish habitat permit prior to construction.
1/12/06	USFWS	No listed species in the project area.	No resolution needed.

Public comments centered on proposed access changes in the vicinity of Westcott Garden Road and Davidson Street and in the vicinity of the Rozak Road and Old Richardson Highway intersections.

Concerning the Westcott/Davidson area, a common concern among commenters was the need to do something to relieve the traffic congestion at Davidson Street which results in unsafe conditions. Some expressed that intersection use by trucks from the nearby gravel operation contributed to congestion and safety issues. There seemed a common desire to keep some form of access in the vicinity of Westcott/Davidson while providing a second intersection to the south to draw excess traffic including trucks away from the Westcott/Davidson residential areas and its nearby frontage roads and intersections. Properties owners expressed acceptance with limiting access on Westcott Garden Road and having Davidson Street closed to gain the benefit of reducing truck traffic in this area.

The following comments were made concerning the Rozak Road and Old Richardson Highway intersections. One business owner who is located 0.23 miles northwest of Rozak Road but without frontage road access to it expressed dissatisfaction with currently needing to travel 1.2 miles in the opposite direction to access the highway in the northbound direction by way of Davidson Road which he considers congested and unsafe. He expressed the need for more intersections throughout the project particularly near to his business in the Rozak Road area. The Old Richardson highway was described by another commenter as accident prone. Overall, commenters favored eliminating the Old Richardson Highway intersection which intersects the Richardson Highway at a sharp angle and directing area traffic to an improved Rozak Road intersection.

In response to comments received, their recommendations were incorporated into the project, a second public meeting was held, and a second scoping letter was sent out. The public and agency response was favorable to the revised proposal presented in this document.

VII. Environmental Commitments and Mitigation Measures

N/A YES NO

List environmental commitments or mitigation measures included in the project.

- All necessary state, federal and local permits shall be acquired.
- Efforts would be made to minimize impacts to nesting birds by timing potential habitat-disturbing activities (vegetation clearing, placement of fill over vegetation, etc.) outside the migratory bird timing window (May 1 – July 15 for interior Alaska) with the following exceptions. Work may occur within the bird timing window if: 1) prior to May 1 of any given year measures are taken (e.g., plastic covering, fill, grading, clearing) such that suitable nesting habitat in not present during the bird window; or 2) if the proposed clearing area has been surveyed by USFWS or DOT&PF Environmental staff and found clear of nesting birds or habitat prior to disturbing activities, or 3) if a refinement of the timing window is coordinated with the U.S. Fish & Wildlife Service (USFWS) prior to construction.
- In response to a USFWS request, if a raptor nest is discovered by DOT&PF staff or the contractor within one-quarter mile of the project, disturbing activities should be avoided within the one-quarter mile area between April 15 and August 1 of any given construction year or the USFWS should be contacted to refine or waive the timing window prior to disturbing activities within the one-quarter mile area.
- An Erosion and Sediment Control Plan and a Storm Water Pollution Prevention Plan would be in place prior to construction.
- If cultural remains are encountered during construction, work must cease in the immediate area and Federal regulations pertaining to emergency discovery situations must be followed. Work can continue in the project area where no cultural materials are present. The Contractor shall notify the Project Engineer, who would notify ADOT&PF Environmental staff. ADOT&PF Environmental staff would immediately contact the State Historic Preservation Office to ensure compliance with the National Historic Preservation Act, and contact the Federal Highway Administration.

VIII. Environmental Documentation Approval

	N/A	YES	NO
1. Project listed as a CE, per FHWA 23 CFR 771.117(c).	☐	☐	☒
2. Project listed as a CE, per FHWA 23 CFR 771.117(d). If no, consult with FHWA, Area Liaison.	☐	☒	☐
3. Project meets the criteria for programmatic approval under a Programmatic CE Agreement between FHWA and DOT&PF.	☐	☐	☒

Prepared by: _____ Date: 5/4/09
Environmental Analyst

Reviewed by: _____ Date: 5/4/09
Engineering Manager

Approved by: _____ Date: 5/4/09
Regional Environmental Coordinator

Approved by: _____ Date: 6/9/09
FHWA Area Liaison *(signature required only for non-programmatic CEs)*

APPENDIX D

PAVEMENT DESIGN

Project: Rich Hwy 353-357 Access Improvements
Proj No.: 66148/HRO-0A2-4(19)

New Construction by:Garrett Thatcher
11/14/2012 12:00:41 PM

AADT = 850	Past Loadings	Future Loadings						X/Y Load Locations (in): Load = 4500 (lbs) Tire Pressure = 110 (psi)		0 0	13.5 0
10% Spring 30% Summer 20% Fall 40% Winter --- Total:	---	78,794 236,382 157,588 315,176 --- 787,940							X/Y Evaluation Points (in):	6.75 0	0 0
Layer	Critical Z Coordinate	Asphalt Properties	Season	Modulus (ksi)	Poisson's Ratio	Tensile Critical Micro Strain	Critical Compressive Stress (psi)	Million Cycles to Failure		Future Damage %	Total Damage %
2(in) sphalt_Concret	1.99	4% Air 5.5% Asph 148 pcf	Spring	755	0.3	86.9		39.96		0.20	0.20%
			Summer	510	0.3	40.8		672.60		0.04	0.04%
			Fall	510	0.3	28.1		2,294.82		0.01	0.01%
			Winter	1,500	0.3	37.7		347.20		0.09	0.09%
								Total Damage:		0.33	0.33
3(in) 4-5% ph_Treated_Ba	4.99	6% Air 4.5% Asph 145 pcf	Spring	250	0.35	293		0.44		17.92	17.92%
			Summer	300	0.35	242		0.71		33.48	33.48%
			Fall	350	0.35	227		0.76		20.63	20.63%
			Winter	500	0.4	108		6.49		4.85	4.85%
								Total Damage:		76.88	76.88
37(in) lect_A_P200<t	5.01		Spring	25	0.4		19.40	0.90		8.74	8.74%
			Summer	35	0.4		23.10	1.53		15.46	15.46%
			Fall	35	0.4		22.20	1.74		9.05	9.05%
			Winter	90	0.4		25.10	25.36		1.24	1.24%
								Total Damage:		34.49	34.49
S-Infinite ect_C_P200<3	42.01		Spring	50	0.45		2.32	8,776.57		0.00	0.00%
			Summer	10	0.45		1.18	269.90		0.09	0.09%
			Fall	10	0.45		1.17	277.49		0.06	0.06%
			Winter	10	0.45		0.69	1,551.98		0.02	0.02%
								Total Damage:		0.17	0.17

11-14-12

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES

Computations

For Frontage Road / Turn Lane Pavement Design

Item No. _____
DATE 8/23/12
Project No. 66148
Project Name Rich 353-357
Calc. by G. Thatcher
Checked by _____

Comments:

Total Design ESAL's:

AADT	
2015	570
2025	700
2035	850

- per Kinney "Draft Traffic Analysis Report" worst case (Rozak Rd) - 2% growth rate prediction

Truck Loading & base year (2010)

$(0.8)(100 \text{ round trips/day})(2 \frac{\text{trucks}}{\text{round trip}})$

= 160 trucks/day

@ construction year = $160(1.02)^5 = 176$ trucks

- assume 80% of max trips daily per PDC "Richardson Hwy 353-357 Users Questionnaire"

% trucks
176 / 570 = 31 %

% truck distribution

- per "Rich Hwy 353-357 Users Questionnaire" & engineering judgement

2-axle	1 %	
3-axle	8 %	← mixer, end dump
4-axle	3 %	← single axle - trailer
5-axle	14 %	← side dump, belly dump
6-axle	5 %	← AK Double
	31 %	

Design ESAL's - 787,940

- per attached spreadsheet

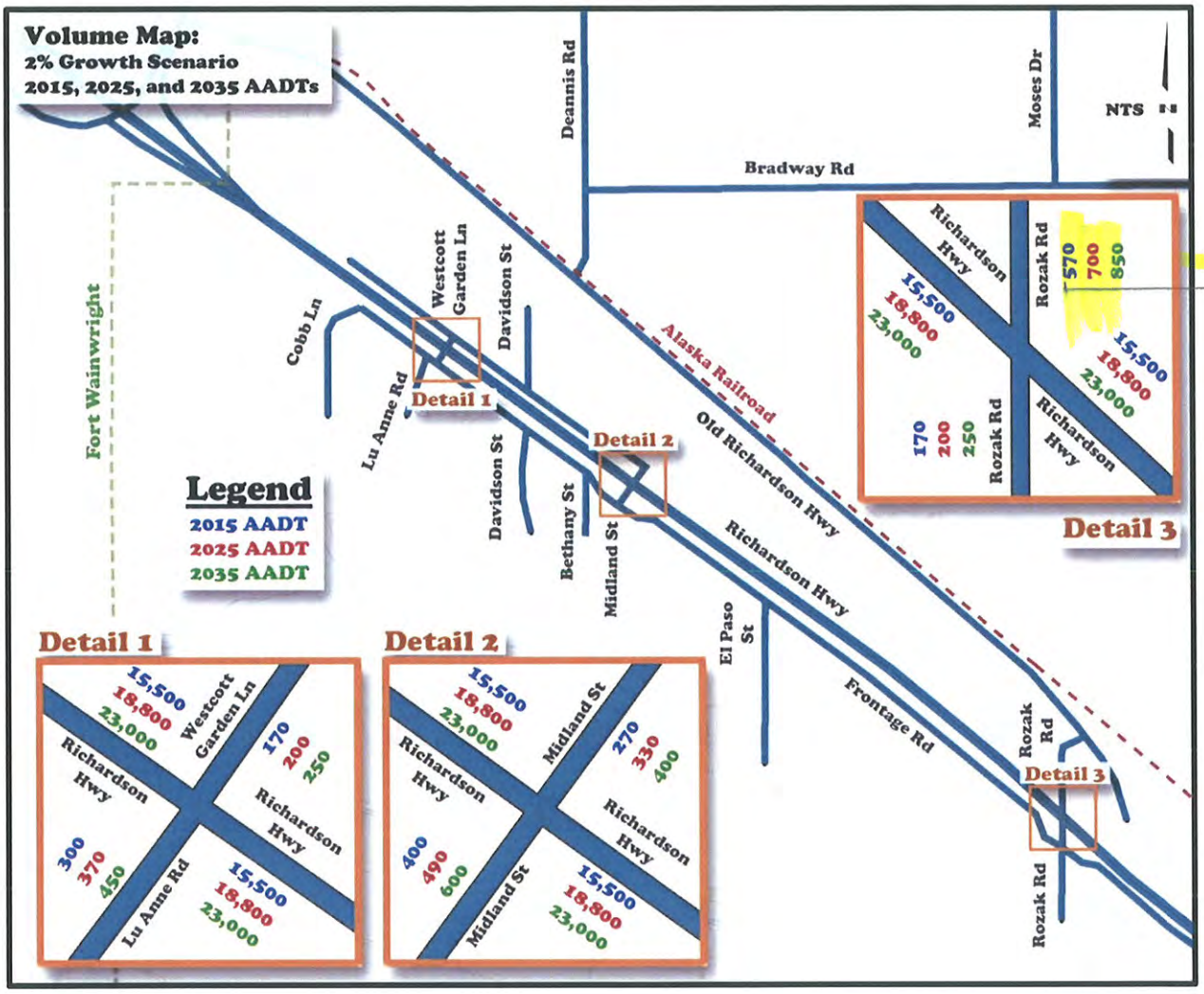


Figure 10 - Volume Map: 2% Growth Scenario

Project Name:	Rich Hwy MP 353-357 Access Improvements	Designer:	Garrett Thatcher
Project Number:	66148	Date:	8/8/2012

Traffic Data for Design and Historic ESALs

Design Data Input

Design Construction Year:	2015
Design Length in Years:	15
Base Year:	2015
Base Year Total AADT:	570
Growth Rate % per Year:	2

% of Base Year AADT for Each Lane	
Lane	%
1	50
2	50
3	0
4	0
5	0
6	0

Truck Category	Load Factor (ESALs per Truck)	% AADT in Truck Category
2-Axle	0.5	1
3-Axle	0.85	8
4-Axle	1.2	3
5-Axle	1.55	14
>=6-Axle	2.24	5

TOTAL DESIGN ESALs: **787,940**

Historic Data Input

Historic Construction Year:	
Backcast % per Year:	

% of Base Year AADT for Each Lane	
Lane	%
1	
2	
3	
4	
5	
6	

Truck Category	Load Factor (ESALs per Truck)	% AADT in Truck Category
2-Axle	0.5	
3-Axle	0.85	
4-Axle	1.2	
5-Axle	1.55	
>=6-Axle	2.24	

TOTAL HISTORIC ESALs: **-**

Construction Year ESAL Calculations

Truck Category	Design Lane AADT	% AADT in Truck Category	Load Factor for Truck Category	Construction Year ESALs
2-Axle	285	1	0.5	520
3-Axle	285	8	0.85	7,074
4-Axle	285	3	1.2	3,745
5-Axle	285	14	1.55	22,573
>=6-Axle	285	5	2.24	11,651
			Total Construction Year ESALs:	45,563

Historic Construction Year ESAL Calculations

Truck Category	Design Lane AADT	% AADT in Truck Category	Load Factor for Truck Category	Historic Construction Year ESALs
2-Axle		0	0.5	0
3-Axle		0	0.85	0
4-Axle		0	1.2	0
5-Axle		0	1.55	0
>=6-Axle		0	2.24	0
			Total Historic Construction Year ESALs:	0

CLICK HERE FOR MORE INFORMATION ON ESAL CALCULATIONS

Richardson Highway 353-357
Users Questionnaire

Business:	Exclusive	Alaska Industrial Gravel Pit & Truck Scale (Alaska Industrial LLC)	Black Gold Express	MidState Equipment	Hamilton Construction	Alaska Transformer CO	McCall Warehouse (Mid City Enterprises LLC)
Contact Person:	Travis Cline	Jeff Day	Nick Schook	Roxanne Braham	Jeff Hamilton	Craig Mansfield	Arvel
Phone Number:	488-8833	479-0999, 347-6743	451-6660 / 978-7419	488-4106	907-441-9807	474-9006	457-7268 / 322-5980
Result:	Received Email 5/18	Made Contact 5/10	Made Contact 5/15	Made Contact 5/7	Made Contact 5/10	Made contact 5/10	Made Contact 5/10
Questions:							
1. What are your dates for peak hauling?	May through Sept./Oct.	Year round, supports Prudhoe and hauls Gravel	April to Oct.	June to Sept	April 15 to Sept 15	Currently property is vacant, plans on leasing some day.	Personal use, now retired.
2. What are your hours of operation?	May-Sept. 7am to 5pm, Oct.-Apr. 8am to 5 pm, As a commercial supplier of aggregate and redi-mix they will open earlier or later for large orders.	6am to 8pm	6 am to 9:30 pm	8 am to 5:30 pm	7am to 7pm		
3. How many trucks do you use per day? Maximum____Minimum____	30 max, 5 min, varies based on demand.	30 max, 20 min	75 max, 30 min	2 max, 1 min	40 constant		
4. How many trips per day? Maximum____Minimum____	100 plus max, 20 min	100 max, 10 min	140 max, 70 min	30 max, 20 min	1, per vehicle above		
5. What times of day does your business generate the most trips?	7am to 5pm	6am to 6pm (constant)	6-7am morning departures, 12-1pm for re-fueling, 6-8pm evening returns.	8am to 5:30pm (constant)	7am to 7pm (constant)		
6. What type of vehicle and approximate length (of vehicle) do you use to haul?	End, sides, belly dumps, lowboys, flats, doubles, mixers. Typically the longest length would be doubles at 120'.	singles at 70', doubles at 120'	singles at 70', doubles at 120'	70' singles	singles at 70', doubles at 120'		
7. How many trucks do you have queued up at the Richardson Highway at the same time?	Have seen a max of 10 each, depends on rush hour traffic.	2 to 3	3	2	2		
8. What pits do you haul from? How do they access the Richardson Highway?	1. TR(Twin Rich) @ 1570 Richardson Hwy (North Side), Davidsons and Wescott accesses. 2. SS(South Side) @ 1625 Cobb St. (South), Wescott Garden Access.	Pit on site, plus developing a pit at Rozak Drive, south side of Hwy.	Great North West site, no pit on site	Pit on site	None		
9. If you were hauling north, what route would you take to get on the Richardson Highway?	1. TR, Davisdon St. Access or Wescott Garden. 2. SS, Wescott or Badger Loop Interchange.	Go down Frontage Rd, Get on Badger Rd. Overpass. If coming back empty, get off by Bethany.	Go right and head south to K&K, make U-turn at that intersection. Currently has direct access to Richardson Hwy, South only. No acceleration or deceleration lanes.	Badger Rd. Overpass via Old Rich	South to Slayden Plumbing, then U-turn north. Currently has direct access to Richardson Hwy, South only. No acceleration or deceleration lanes.	Go west via Badger Rd Overpass	Uses Davison St. unless towing trailer, then goes to Badger Rd. Overpass, safer.
10. If you were hauling south, what route would you take to get on the Richardson Highway?	1. TR, Davidson or Wescott. 2. SS, Wescott only.	Singles go right and head south, doubles take same route as going north, but takes the ramp south.	Go right and head south.	Rozak, via Old Rich	Go south like above, and keep going.	Go east via Wescott Garden Lane	Uses Davison St.
11. Any existing road features along the above routes that negatively affect driver comfort?	Gravel Frontage Roads and Dust (Cobb Lane and between their TR Pit and Wescott), Sight distance both sides appears okay.	No accell, decell lanes, no lights.	Same access as Hamilton Construction and the auction house. Get's congested. Does not use other accesses from property to keep the dust down.	No, lot has access only via Old Rich	No accell/decell lanes on Rich	Satisfied w/ how it is now.	
12. Does your company ever have oversize, specialized loads? If so length and width, including pilot cars. (example - dredging crane)	Yes, Dredge and crane moves. Max 150' length and 30' width.	Double combo, 120'	Doubles at 120'	D-10 with 3 pilot cars, approximately 120'	D10 w/ 3 pilots, 120'		
Additional information and comments:			Need a Frontage road to 12-Mile village. Better intersection @ K&K. Intersections need to handle doubles.		North-west corner is current access w/ 200 trips a day of regular trucks and cars. Cul-de-sac will not work, need the direct access to the Rich.	Frontage Road is currently 3' from the property line.	

APPENDIX E

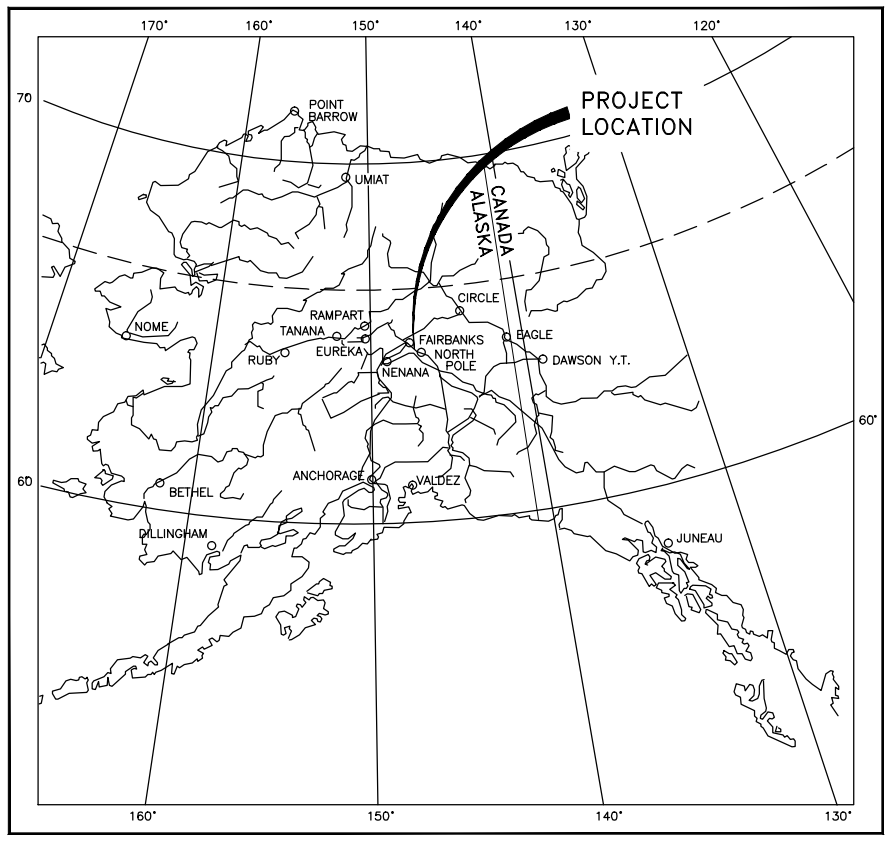
PLAN & PROFILE SHEETS AND UTILITY CONFLICT PLAN SHEETS

Plan & Profile

Utility Conflicts

Plan & Profile

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	1	1

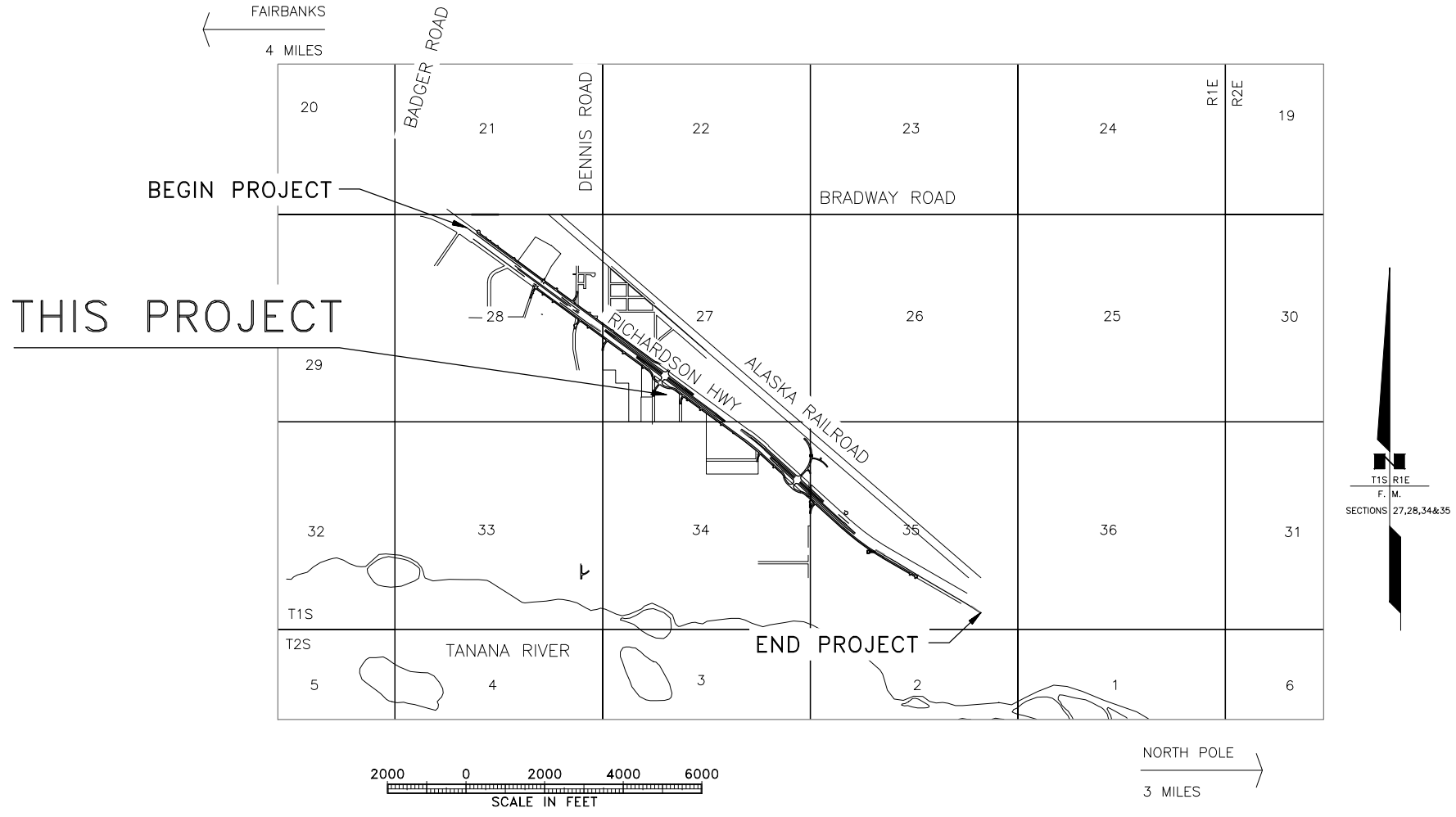


STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT
PROJECT NO. IM-HRO-0A24(019)/66148
RICHARDSON HIGHWAY
MILEPOST 353 - 357
ACCESS IMPROVEMENTS

Sheet List Table

Sheet Number	Sheet Title
T1.0	Title
C1.02	North Frontage Road (1 of 6)
C1.03	North Frontage Road (2 of 6)
C1.04	North Frontage Road (3 of 6)
C1.05	North Frontage Road (4 of 6)
C1.06	North Frontage Road (5 of 6)
C1.07	North Frontage Road (6 of 6)
C1.09	South Frontage Road (1 of 10)
C1.10	South Frontage Road (2 of 10)
C1.11	South Frontage Road (3 of 10)
C1.12	South Frontage Road (4 of 10)
C1.13	South Frontage Road (5 of 10)
C1.14	South Frontage Road (6 of 10)
C1.15	South Frontage Road (7 of 10)
C1.16	South Frontage Road (8 of 10)
C1.17	South Frontage Road (9 of 10)
C1.18	South Frontage Road (10 of 10)
C1.19	Midland Street Intersection
C1.20	Rozak Road Intersection
C1.21	Old Richardson Connector



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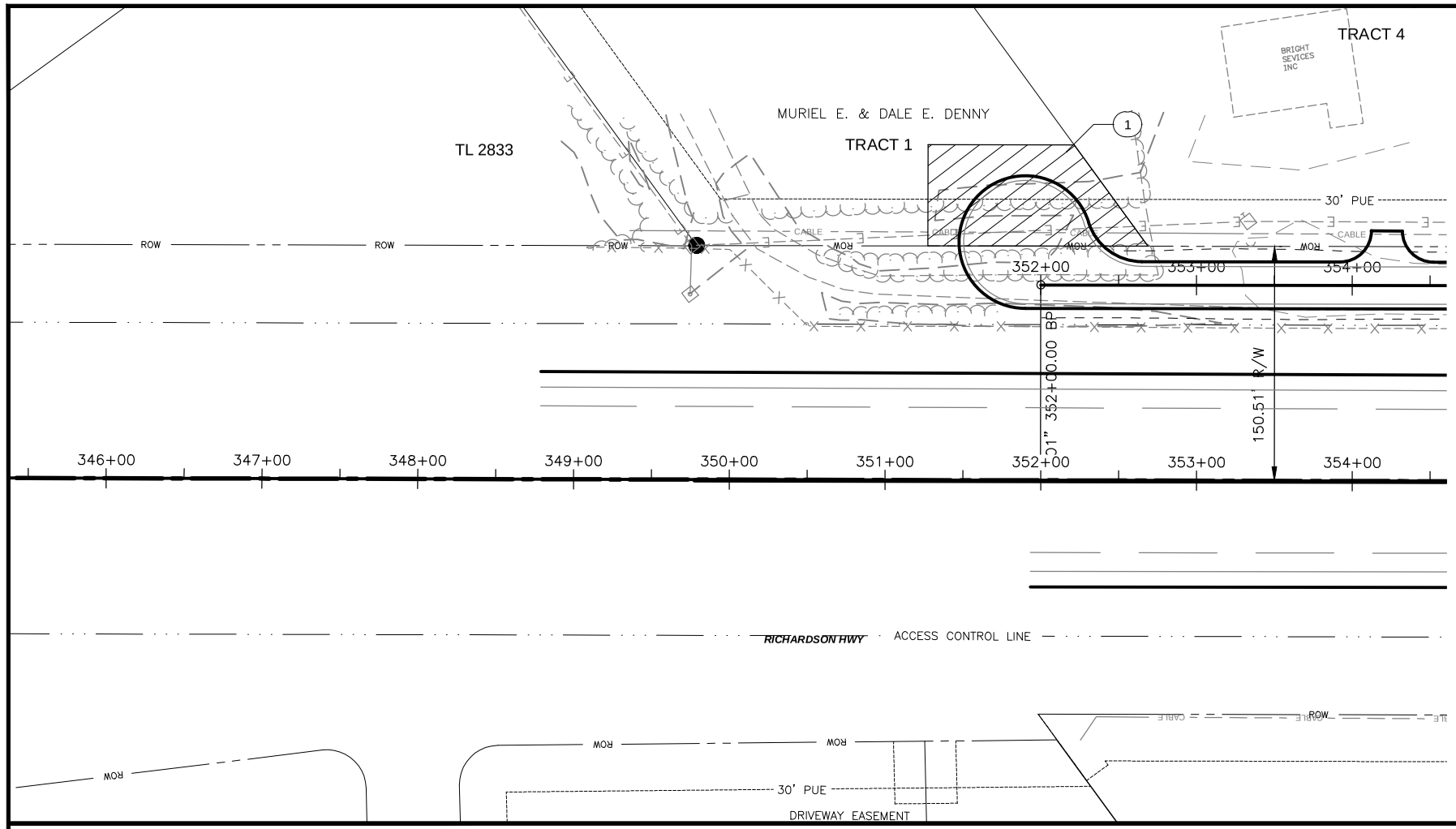
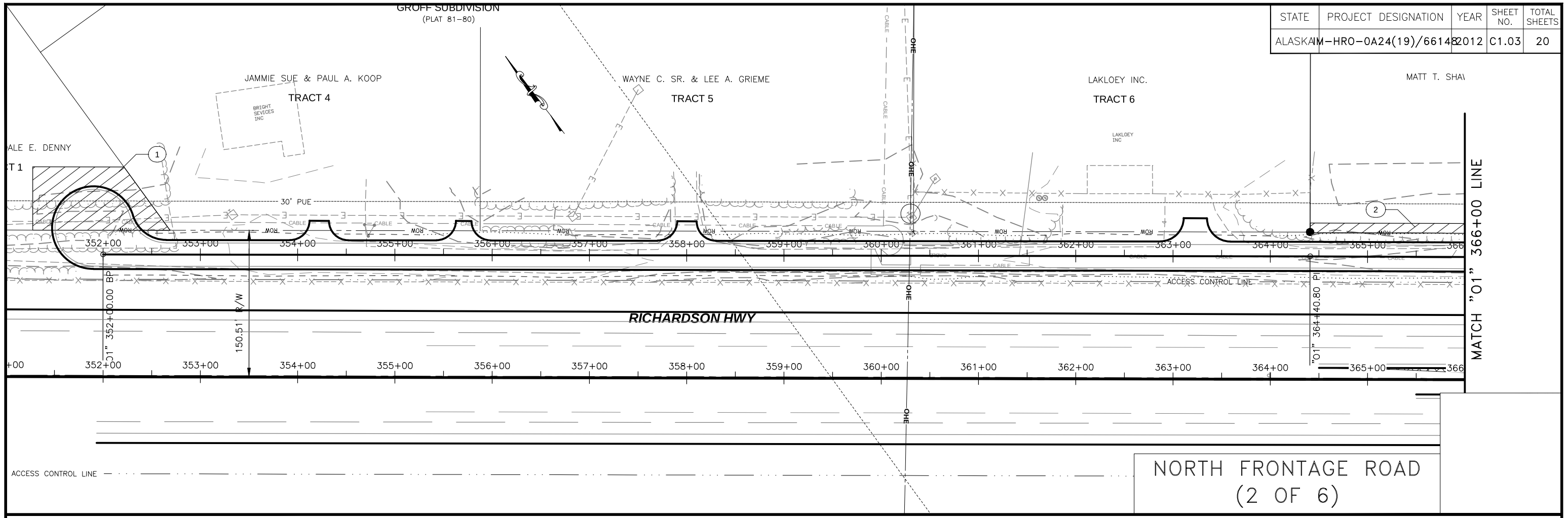
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.02	20

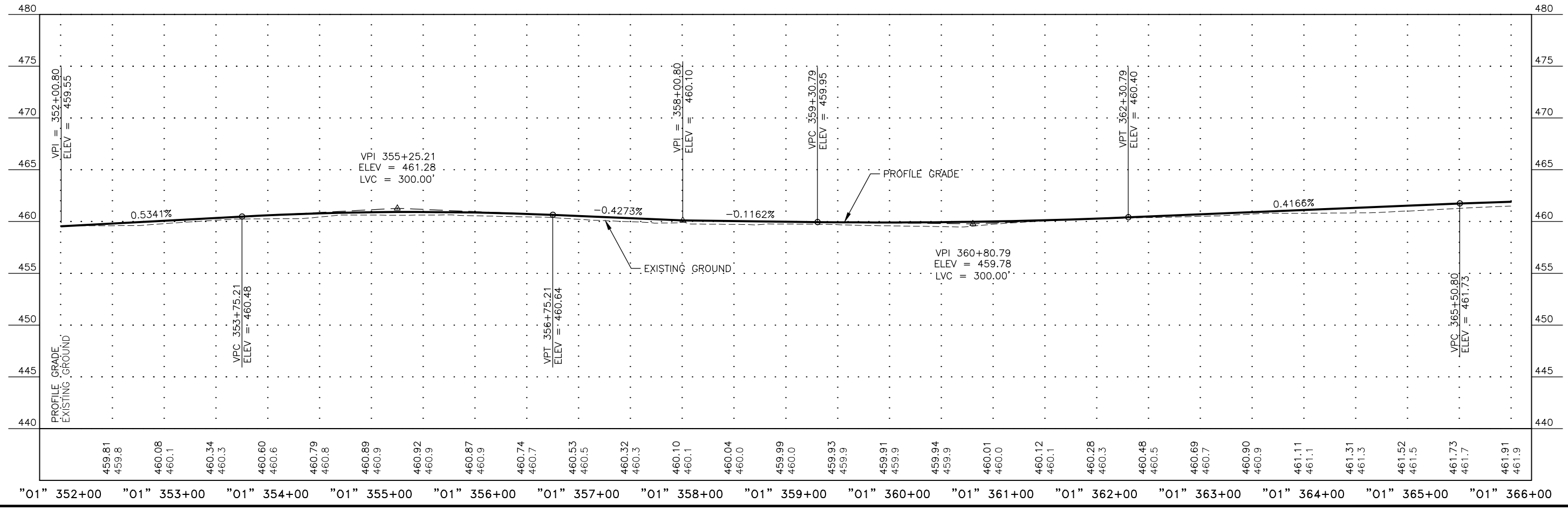


NOTES:
1. UTILITIES SHOWN ARE SURVEYED OR FROM SYSTEM MAPS PROVIDED BY THE UTILITY COMPANY

NORTH FRONTAGE ROAD (1 OF 6)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.03	20





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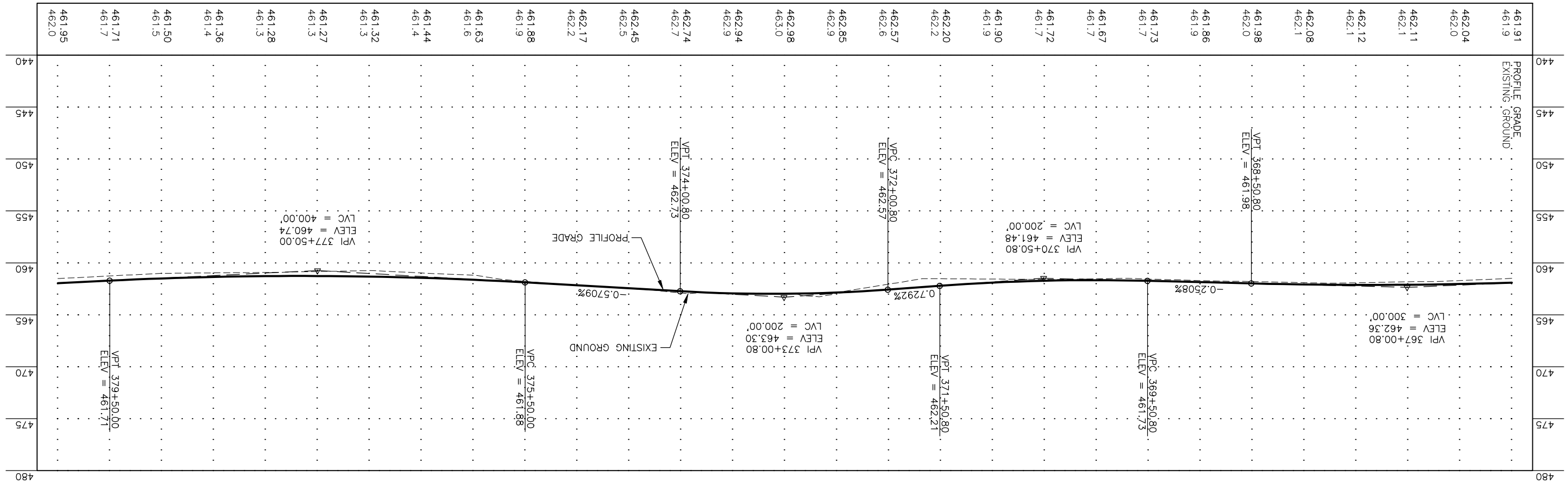
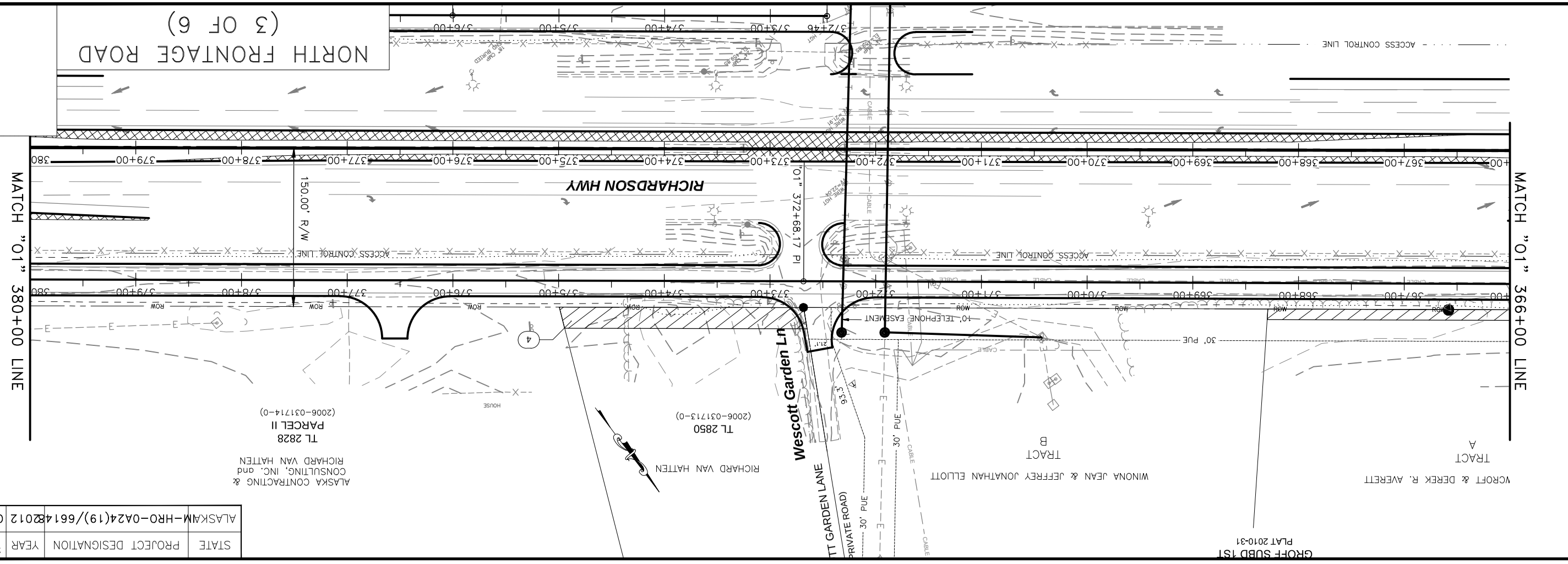


NORTH FRONTAGE ROAD
(3 OF 6)



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	M-HRO-0A24(19)/66142	2012	C1.04	20

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.05	20

LIBERTY PARK SUBDIVISION (PLAT 2010-134)

LOT E

MARK G. BACKES LOT B

Davison St

60'

33' SLE

POSSIBLE UTILITY POLE CONFLICTS

ALASKA CONTRACTING & CONSULTING, INC. and RICHARD VAN HATTEN

TL 2828 PARCEL II (2006-031714-0)

DON R. MCADOO LOT F

LOT 3 BLOCK 31

TL 2837 (BK.475, PG.280)

CINDY A. & STEVE W. COLBURN

TL 2746 PARCEL III (2004-025175-0)

TL 2747 PARCEL IV (2004-025175-0)

COLAS TL 2 PARC (2004-0

MATCH "01" 380+00 LINE

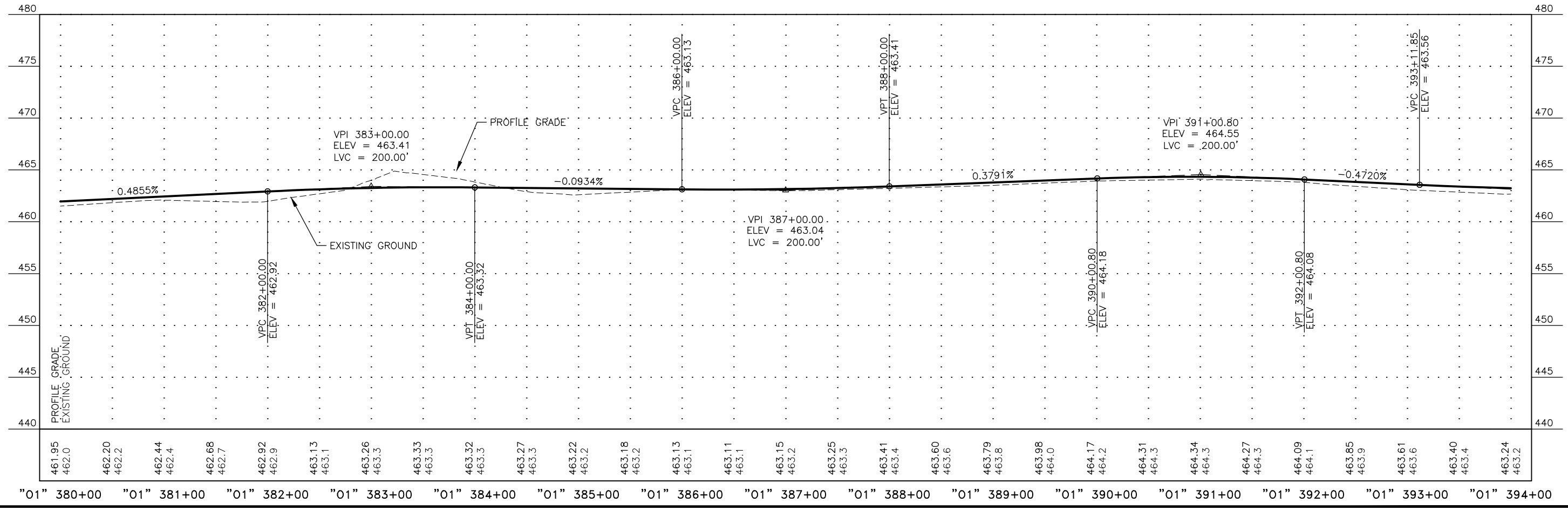
MATCH "01" 394+00 LINE

ACCESS CONTROL LINE

150.00' R/W

RICHARDSON HWY

NORTH FRONTAGE ROAD
(4 OF 6)



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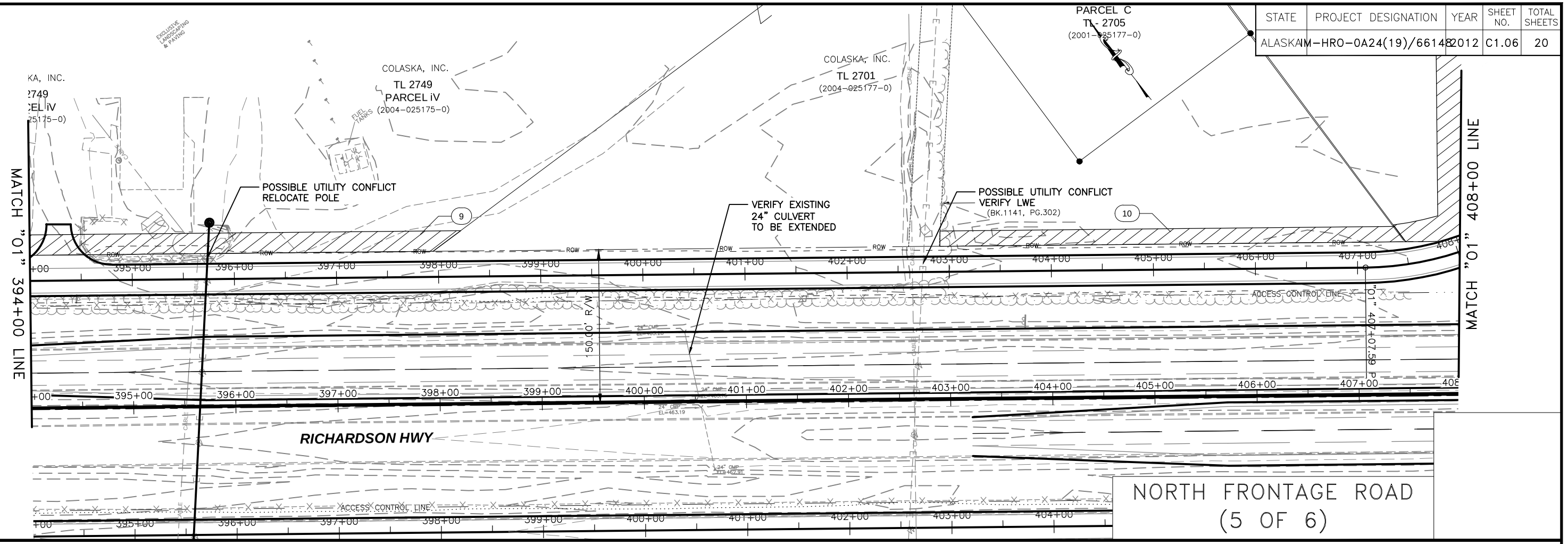
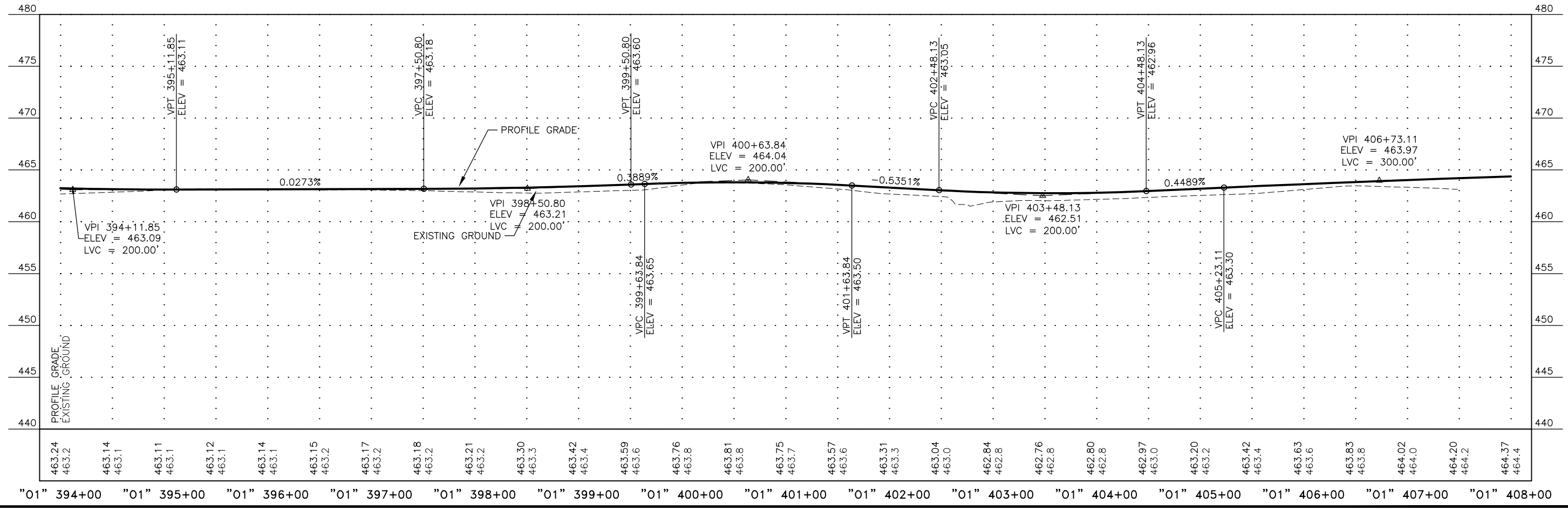
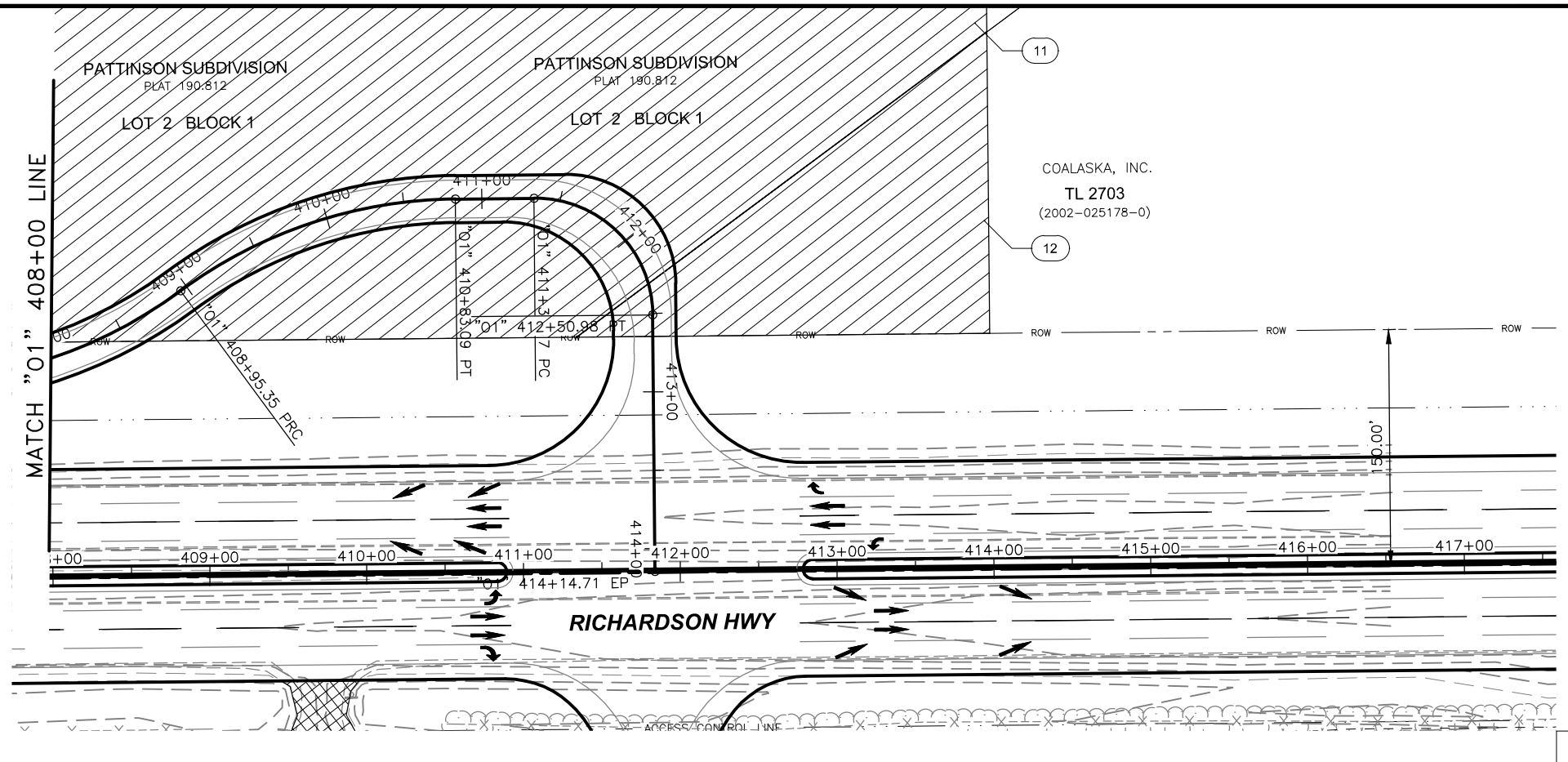
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.06	20

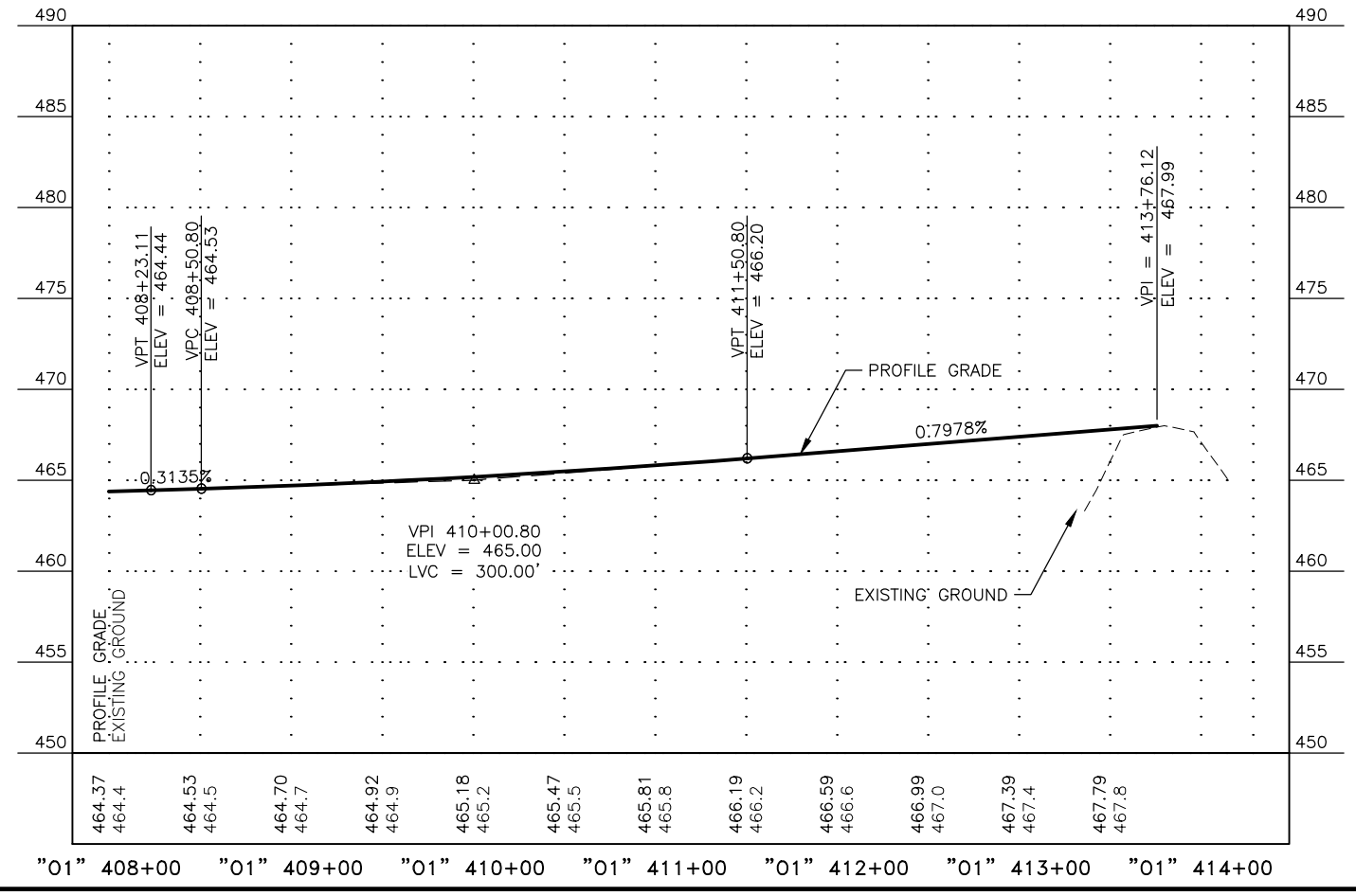




STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.07	20



NORTH FRONTAGE ROAD
(6 OF 6)



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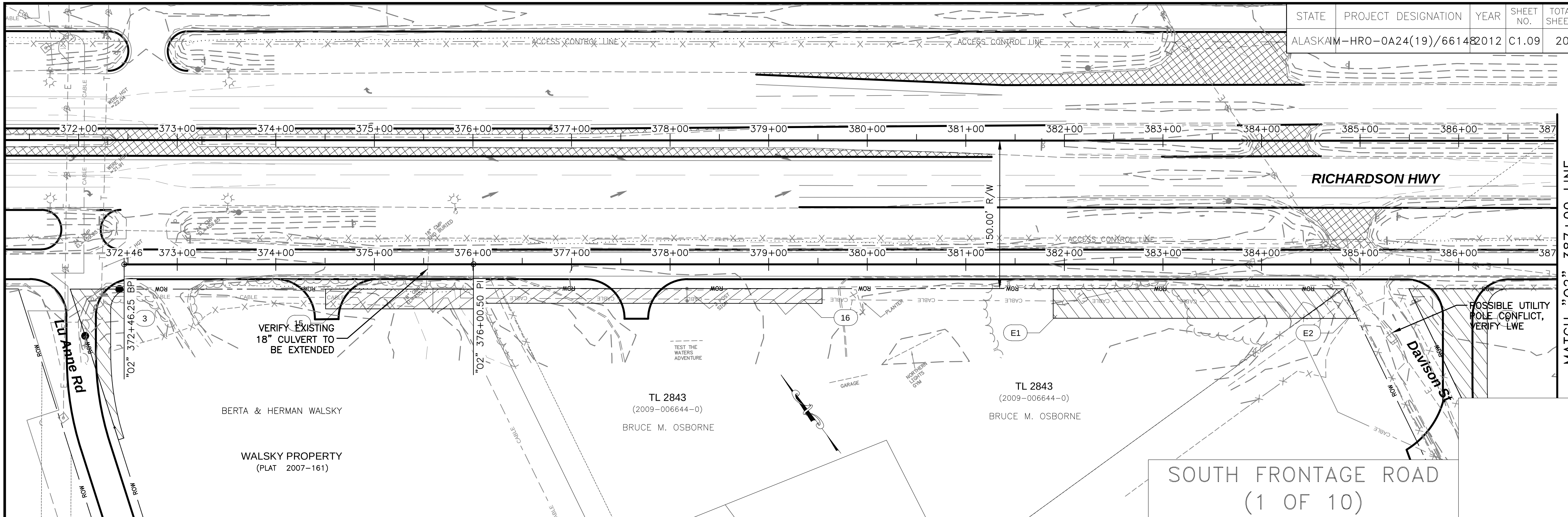
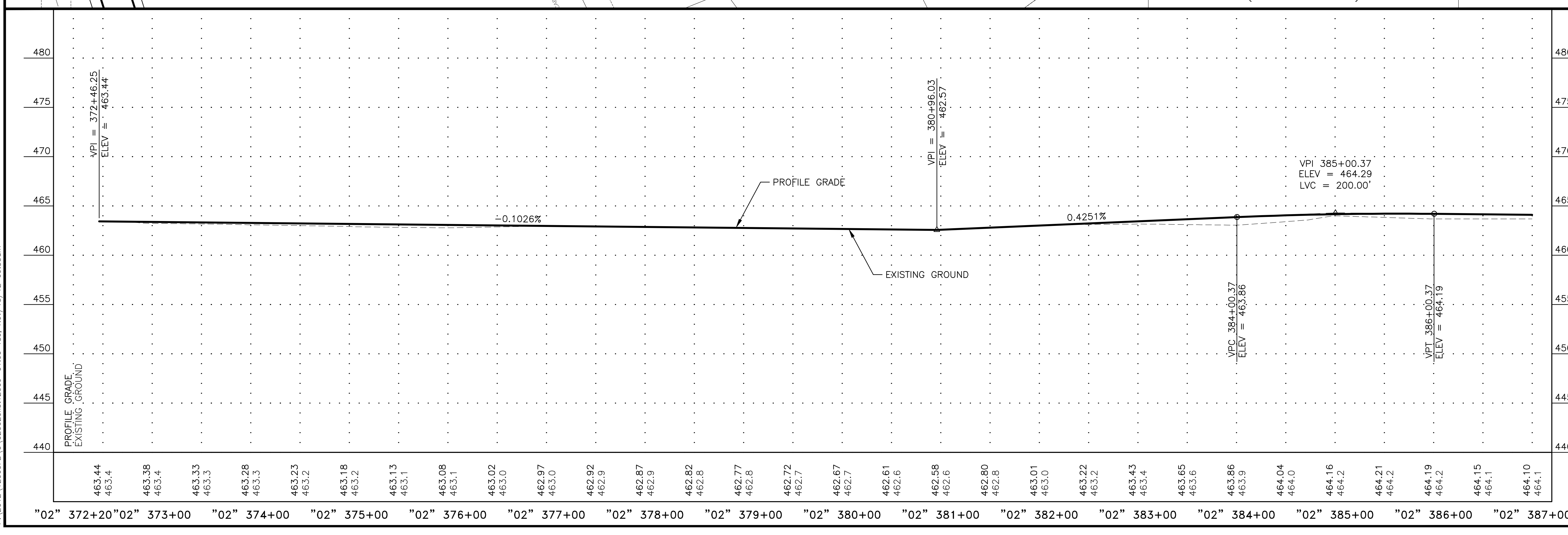
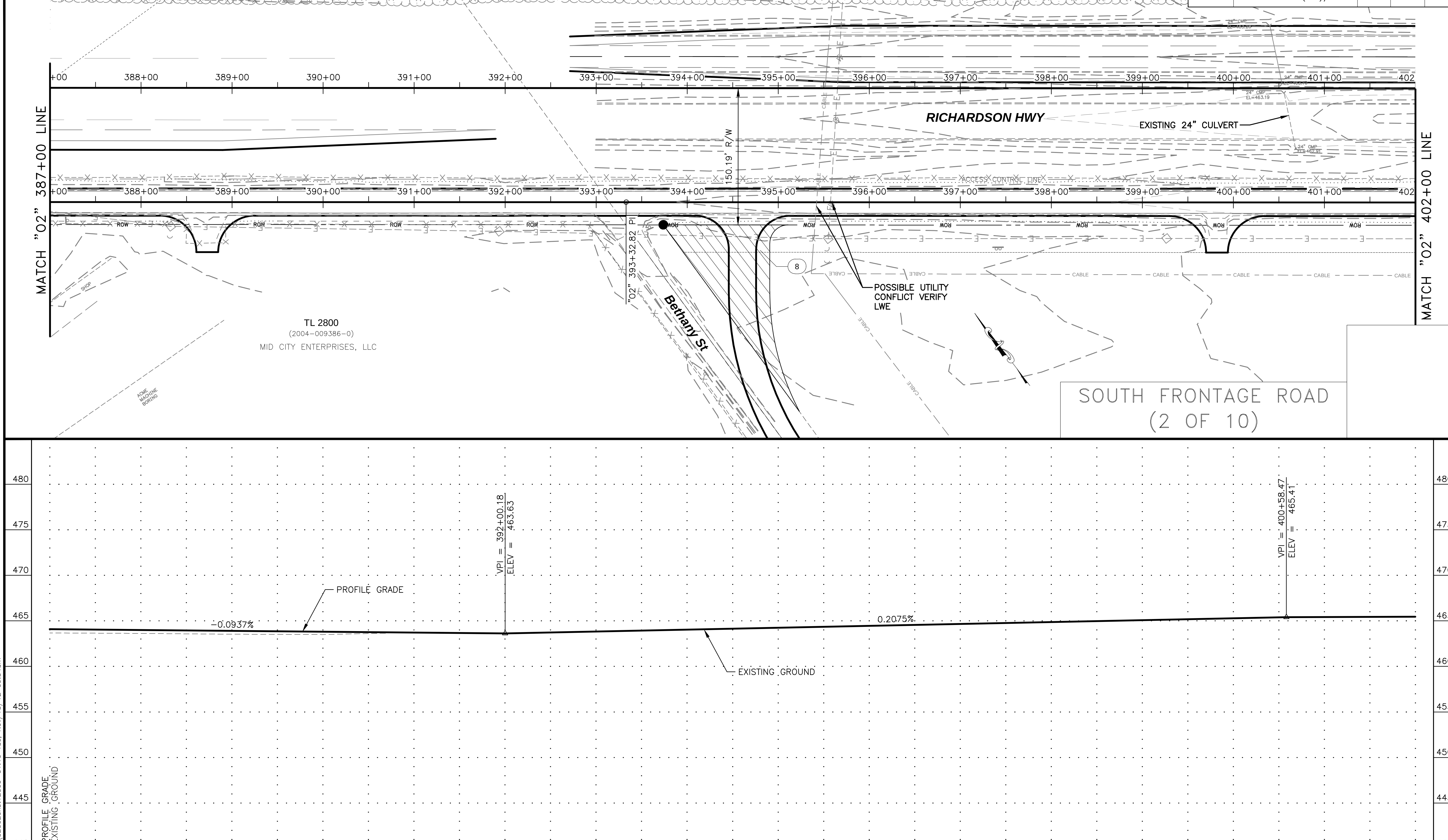
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.09	20





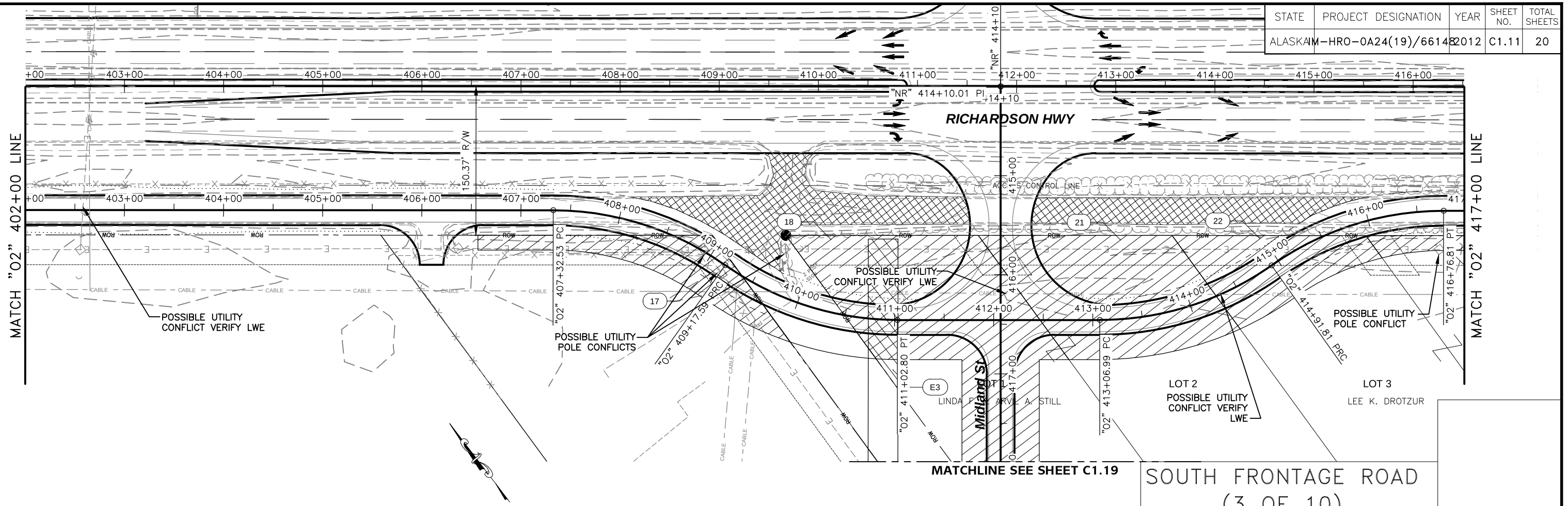
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.10	20

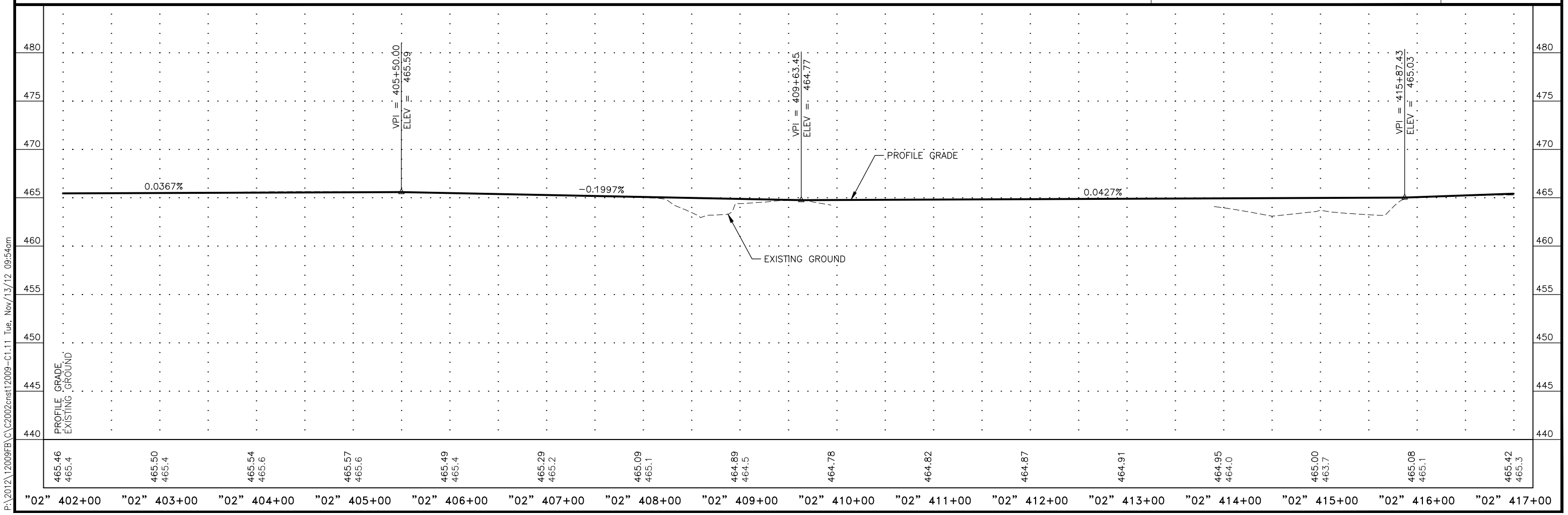
SOUTH FRONTAGE ROAD (2 OF 10)



Station	Profile Grade	Existing Ground
"O2" 387+00	464.10	463.6
	464.05	463.6
"O2" 388+00	464.01	463.6
	463.96	463.5
"O2" 389+00	463.91	463.5
	463.87	463.5
"O2" 390+00	463.82	463.5
	463.77	463.6
"O2" 391+00	463.72	463.7
	463.68	463.6
"O2" 392+00	463.63	463.6
	463.73	463.7
"O2" 393+00	463.84	463.8
	463.94	463.9
"O2" 394+00	464.05	464.0
	464.15	464.1
"O2" 395+00	464.25	464.2
	464.36	464.3
"O2" 396+00	464.46	464.4
	464.56	464.5
"O2" 397+00	464.67	464.6
	464.77	464.7
"O2" 398+00	464.88	464.8
	464.98	464.9
"O2" 399+00	465.08	465.0
	465.19	465.1
"O2" 400+00	465.29	465.3
	465.39	465.4
"O2" 401+00	465.43	465.4
	465.45	465.4
"O2" 402+00	465.46	465.4

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.11	20





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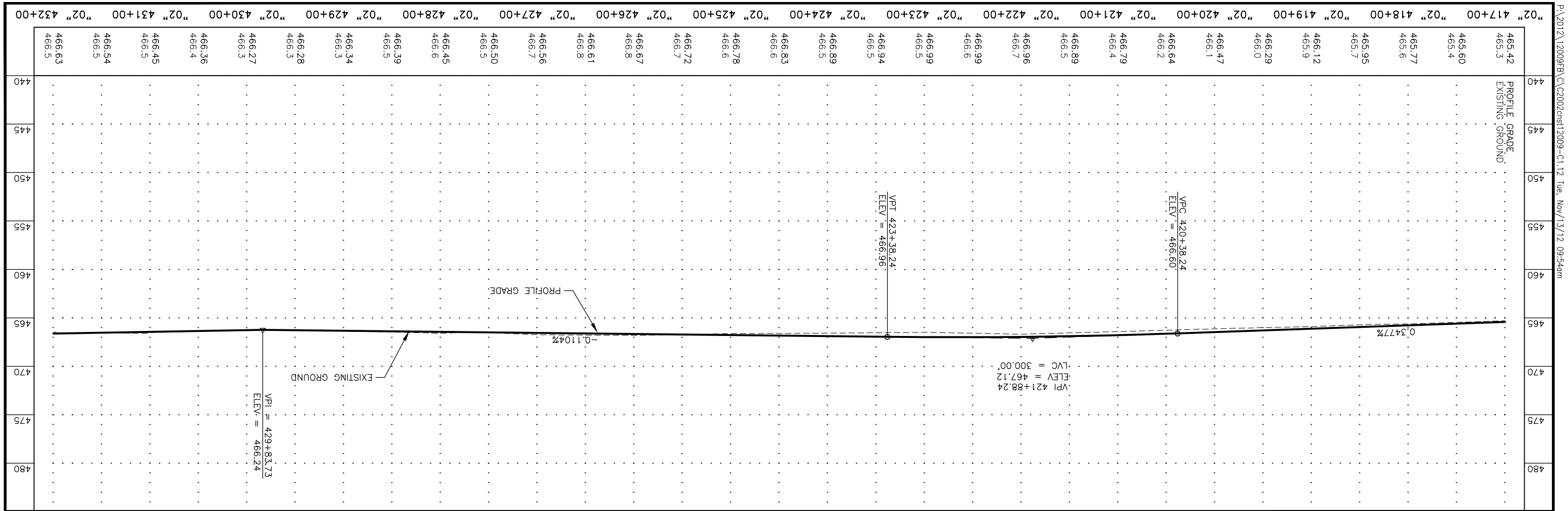
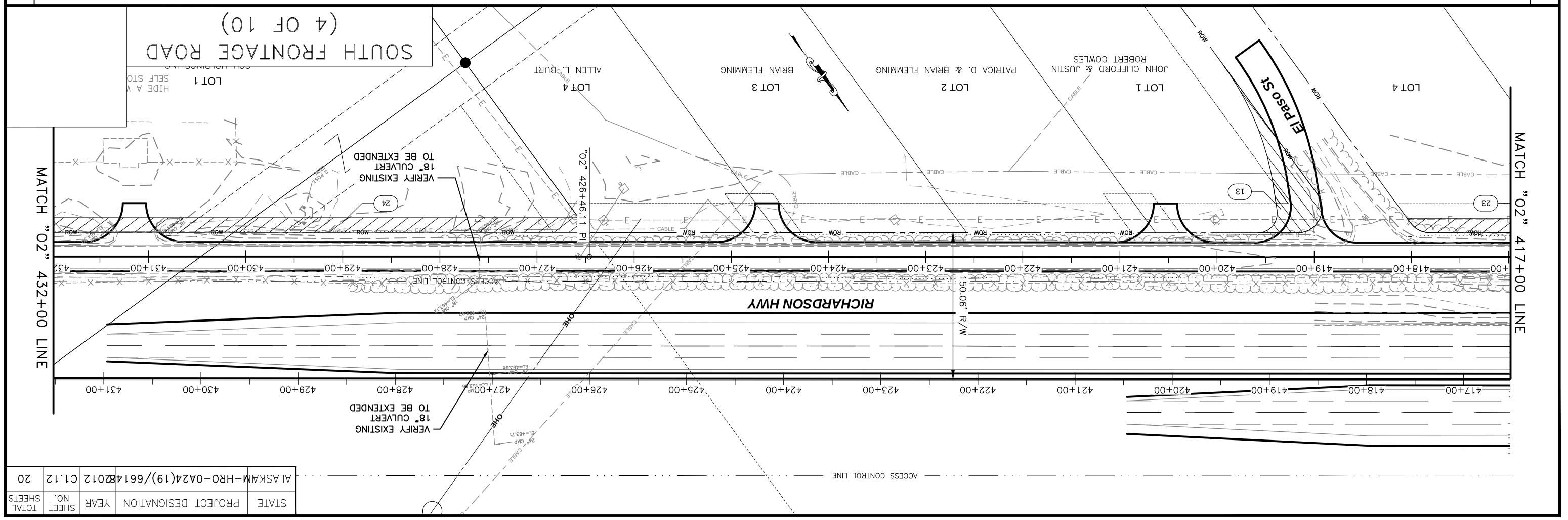


SOUTH FRONTAGE ROAD
(4 OF 10)



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	M-HRO-0A24(19)/66142	2012	C1.12	20

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.13	20

ROW

ACCESS CONTROL LINE

"NR" 437+43.36 PC

6'X 4' MULTI-PLATE ELEV.460.28

"NR" 443+45.56 PT

432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00

VERIFY EXISTING 48" CULVERT TO BE EXTENDED

EXISTING 6'X4' MULTI-PLATE

RICHARDSON HWY

149.76' R/W

MATCH "02" 432+00 LINE

MATCH "02" 447+00 LINE

ACCESS CONTROL LINE

"02" 437+84.54 PC

"02" 443+76.19 PT

25 26 38

HOUSE SHEDS PAD MIDWAY AUTO

LOT 2A
MIDWAY
PLAT 2003-53

LOT 2B
BETTE A. WATTS

LOT 3
MIDWAY INDUSTRIAL PARK
PLAT 81-134
DAVID FLENAUGH

LOT 3
MIDWAY INDUSTRIAL PARK
PLAT 81-134
DAVID FLENAUGH

SOUTH FRONTAGE ROAD (5 OF 10)

480 475 470 465 460 455 450 445 440

PROFILE GRADE

0.1769%

EXISTING GROUND

PROFILE GRADE
EXISTING GROUND

"02" 432+00	"02" 433+00	"02" 434+00	"02" 435+00	"02" 436+00	"02" 437+00	"02" 438+00	"02" 439+00	"02" 440+00	"02" 441+00	"02" 442+00	"02" 443+00	"02" 444+00	"02" 445+00	"02" 446+00	"02" 447+00
466.63 / 466.5	466.71 / 466.5	466.80 / 466.5	466.89 / 466.7	466.98 / 466.9	467.07 / 467.0	467.16 / 467.0	467.25 / 467.2	467.33 / 467.3	467.42 / 467.2	467.51 / 467.2	467.60 / 467.1	467.69 / 467.1	467.78 / 467.4	467.86 / 467.7	467.95 / 467.7	468.04 / 467.8	468.13 / 467.8	468.22 / 467.8	468.31 / 467.9	468.39 / 467.9	468.48 / 468.0	468.57 / 468.1	468.66 / 468.2	468.75 / 468.3	468.84 / 468.4	468.93 / 468.4	469.01 / 468.4	469.10 / 468.4	469.19 / 468.5	469.28 / 468.6

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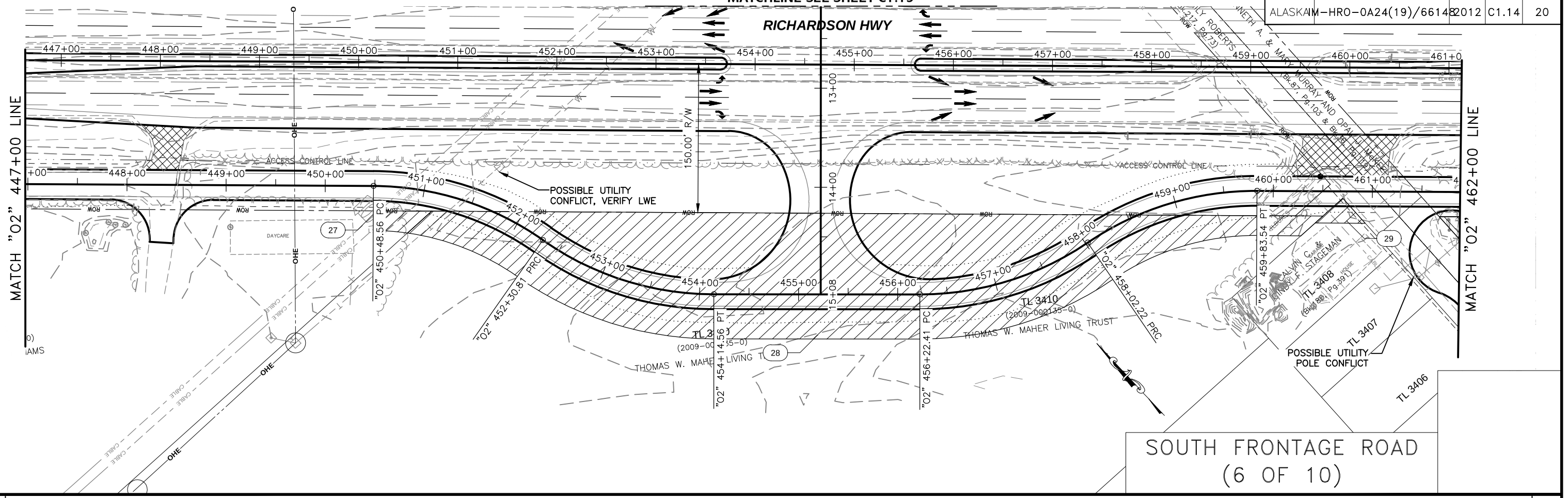
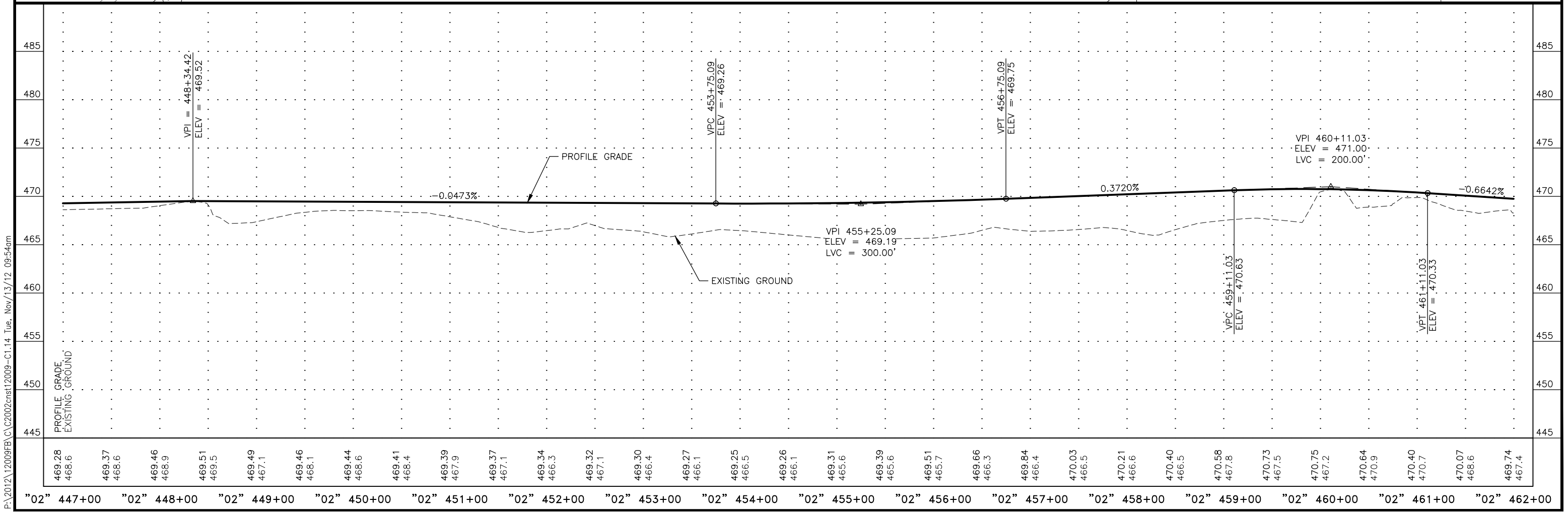
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.14	20

MATCHLINE SEE SHEET C1.19





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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.15	20

EXISTING 18" CULVERT

ACCESS CONTROL LINE

RICHARDSON HWY

"NR" 471+62.39 PC

MATCH "02" 462+00 LINE

EXISTING 18" CULVERT

462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00

150.00' R/W

ACCESS CONTROL LINE

462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00

MATCH "02" 477+00 LINE

ROW

30

31

E5

"02" 472+38.98 PC

PERRY E. TAX (BK-39, PG-195)

ROZAK PAWN

TL 3515
(2009-025553-0)
ROBERT M. SCHMIT

TL 3515
(2009-025553-0)
ROBERT M. SCHMIT

SOUTH FRONTAGE ROAD
(7 OF 10)

VPC 462+21.26
ELEV = 469.60

VPT 464+21.26
ELEV = 469.05

PROFILE GRADE

0.1171%

VPI 463+21.26
ELEV = 468.94
LVC = 200.00'

EXISTING GROUND

PROFILE GRADE
EXISTING GROUND

480 475 470 465 460 455 450 445 440

469.74 467.4 | 469.43 467.4 | 469.20 467.6 | 469.07 467.8 | 469.04 467.5 | 469.09 467.3 | 469.15 467.1 | 469.20 466.9 | 469.26 466.5 | 469.32 464.6 | 469.38 464.6 | 469.44 465.2 | 469.50 466.9 | 469.56 467.9 | 469.61 467.9 | 469.67 467.9 | 469.73 467.8 | 469.79 467.9 | 469.85 468.0 | 469.91 468.1 | 469.97 468.6 | 470.02 469.1 | 470.08 468.9 | 470.14 468.7 | 470.20 468.4 | 470.26 468.3 | 470.32 468.4 | 470.38 468.4 | 470.43 468.4 | 470.49 468.4 | 470.55 468.5

"02" 462+00 "02" 463+00 "02" 464+00 "02" 465+00 "02" 466+00 "02" 467+00 "02" 468+00 "02" 469+00 "02" 470+00 "02" 471+00 "02" 472+00 "02" 473+00 "02" 474+00 "02" 475+00 "02" 476+00 "02" 477+00

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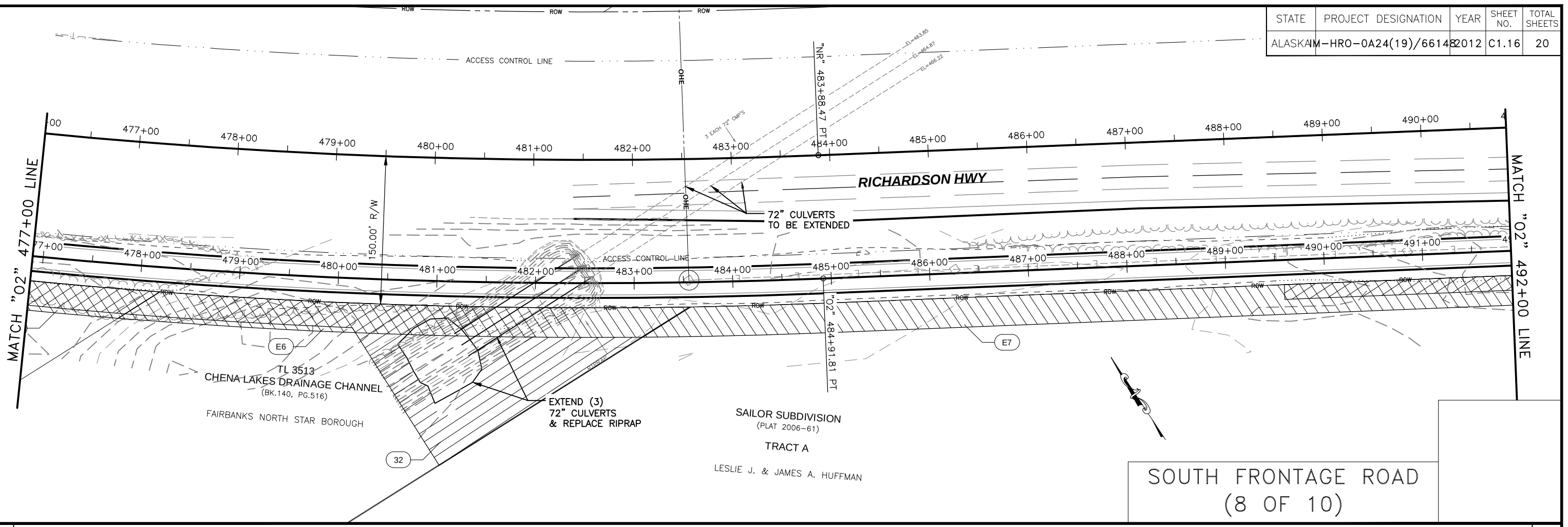
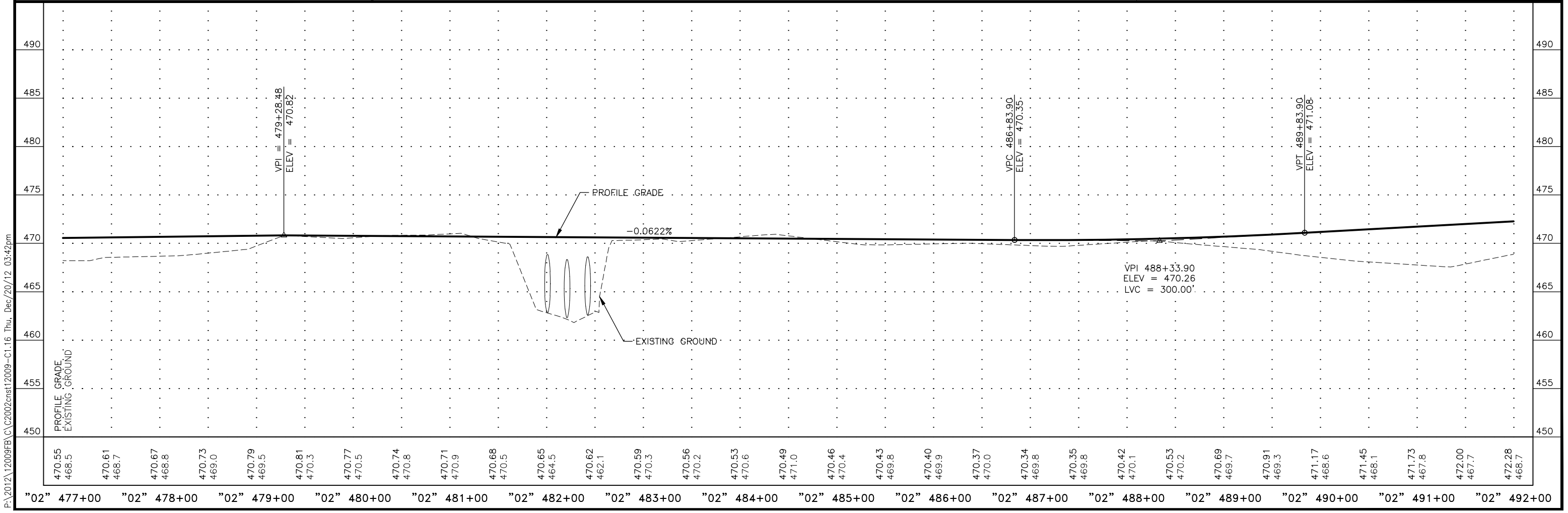
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.16	20



SOUTH FRONTAGE ROAD
(8 OF 10)



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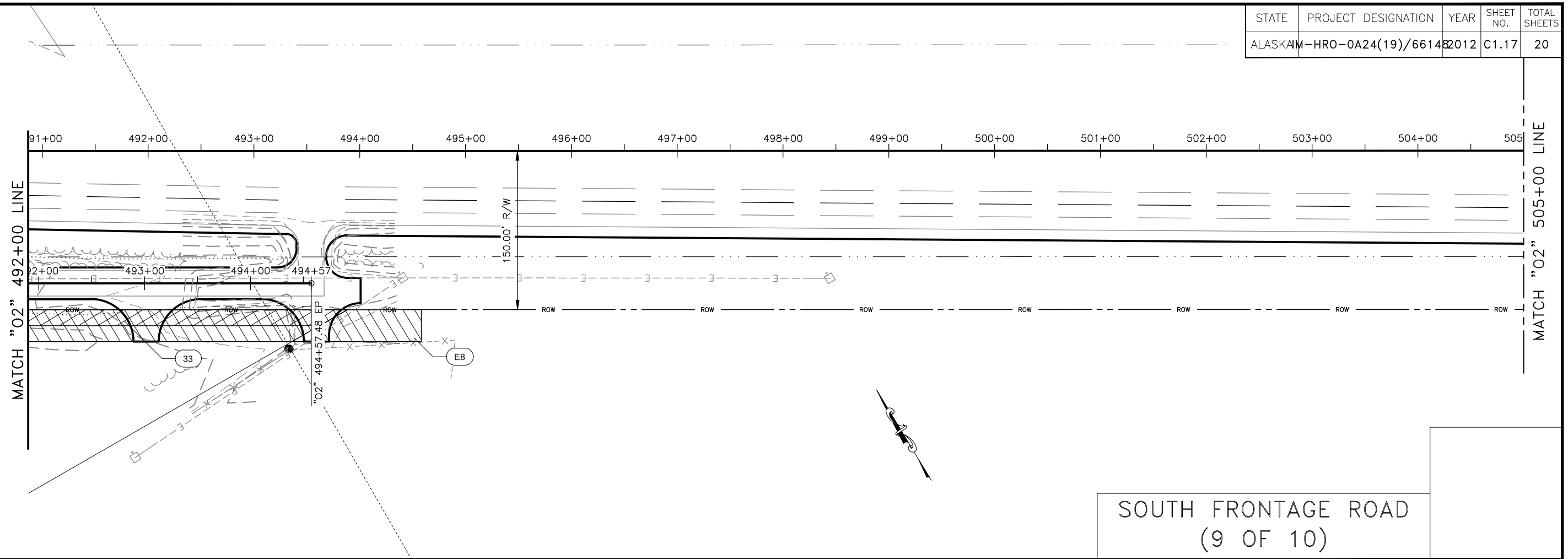
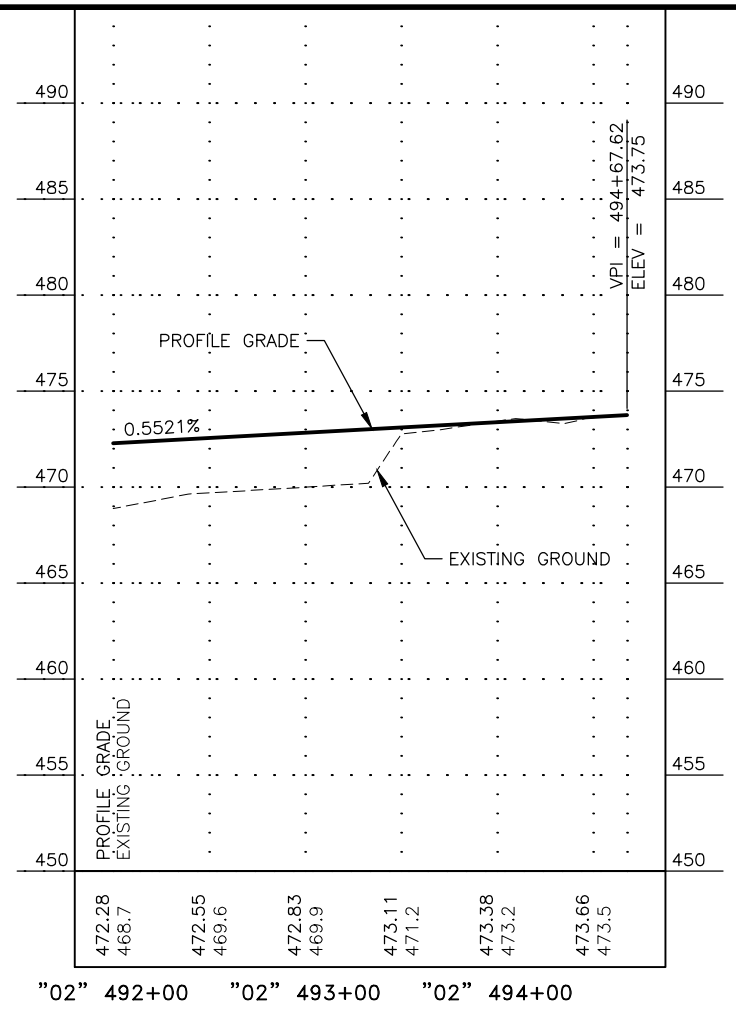
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.17	20



SOUTH FRONTAGE ROAD
(9 OF 10)



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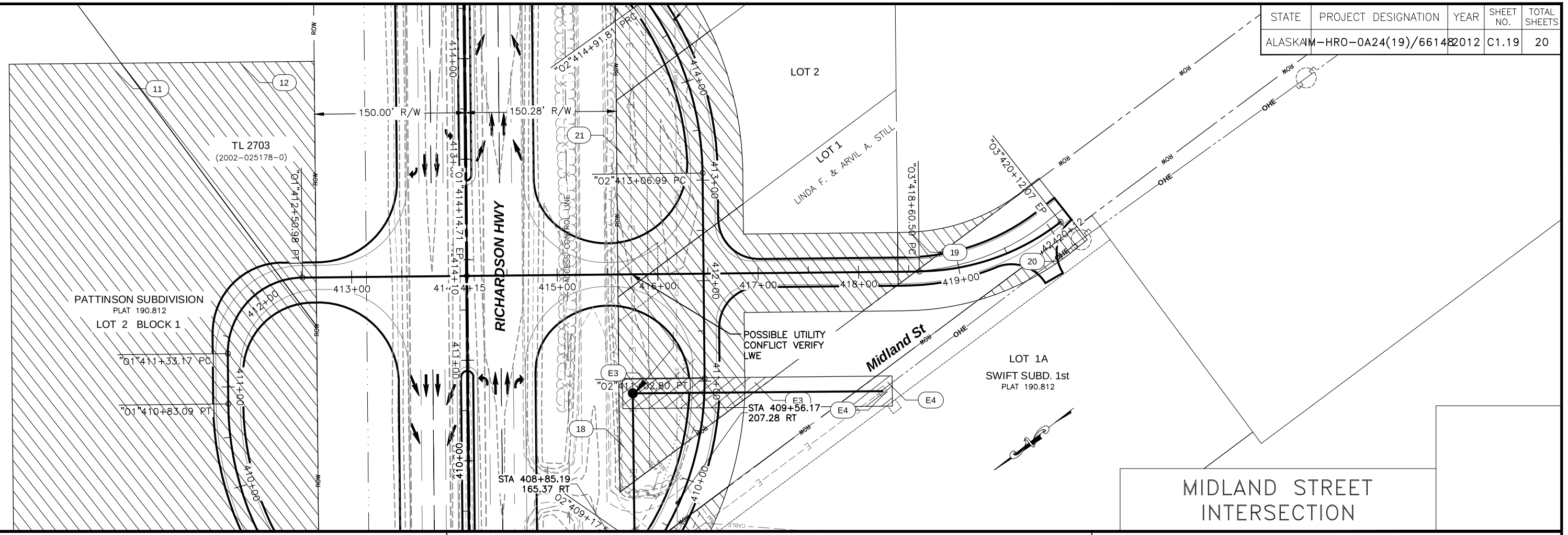
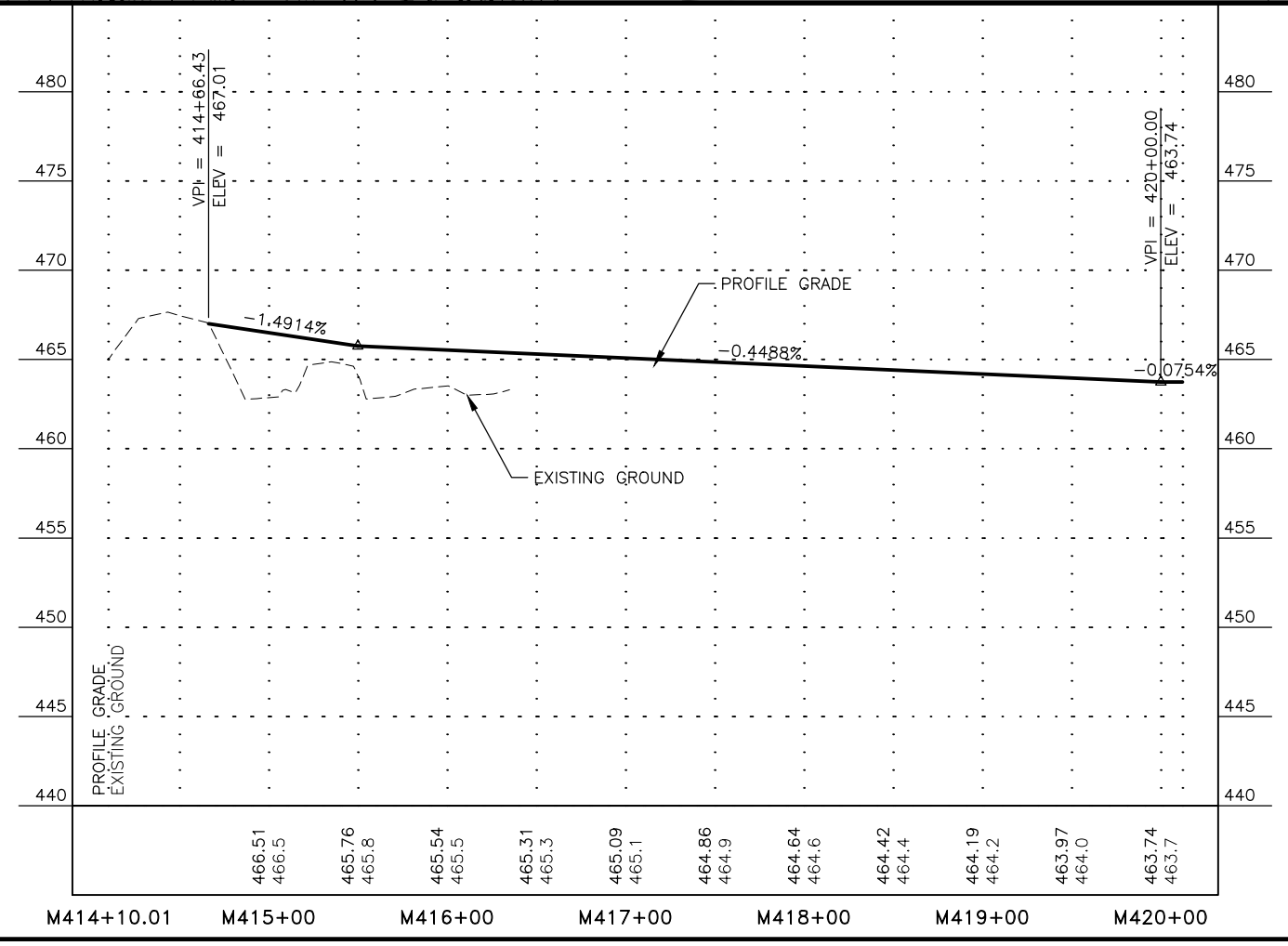
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.18	20

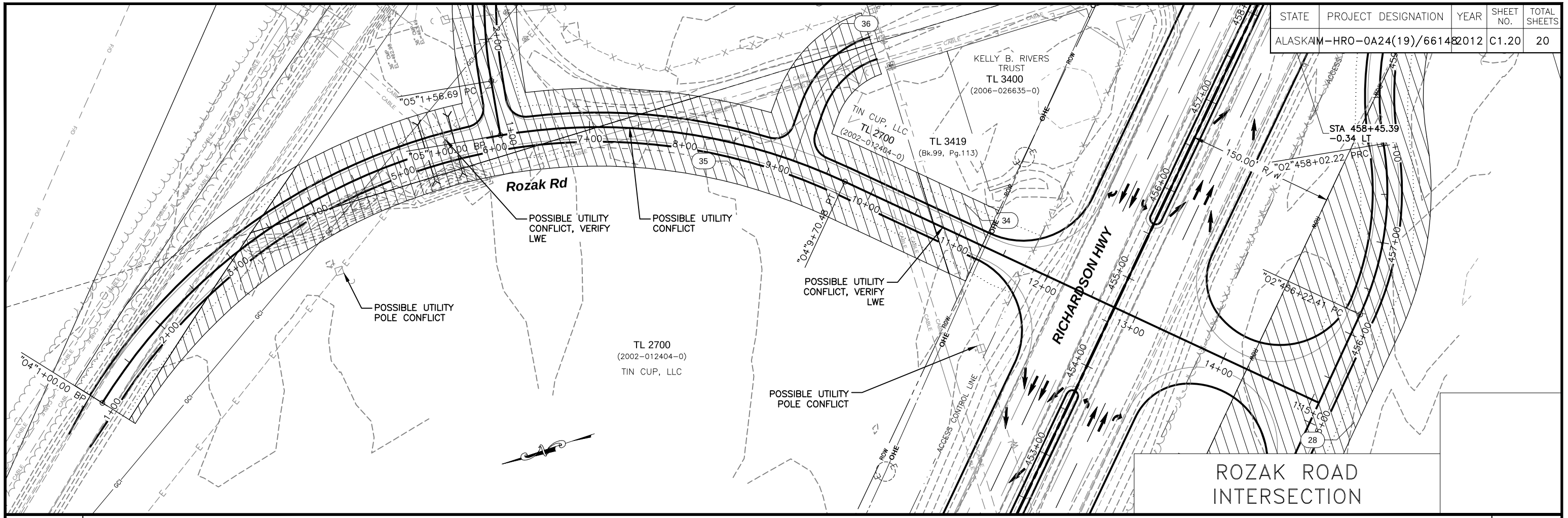
SOUTH FRONTAGE ROAD (10 OF 10)

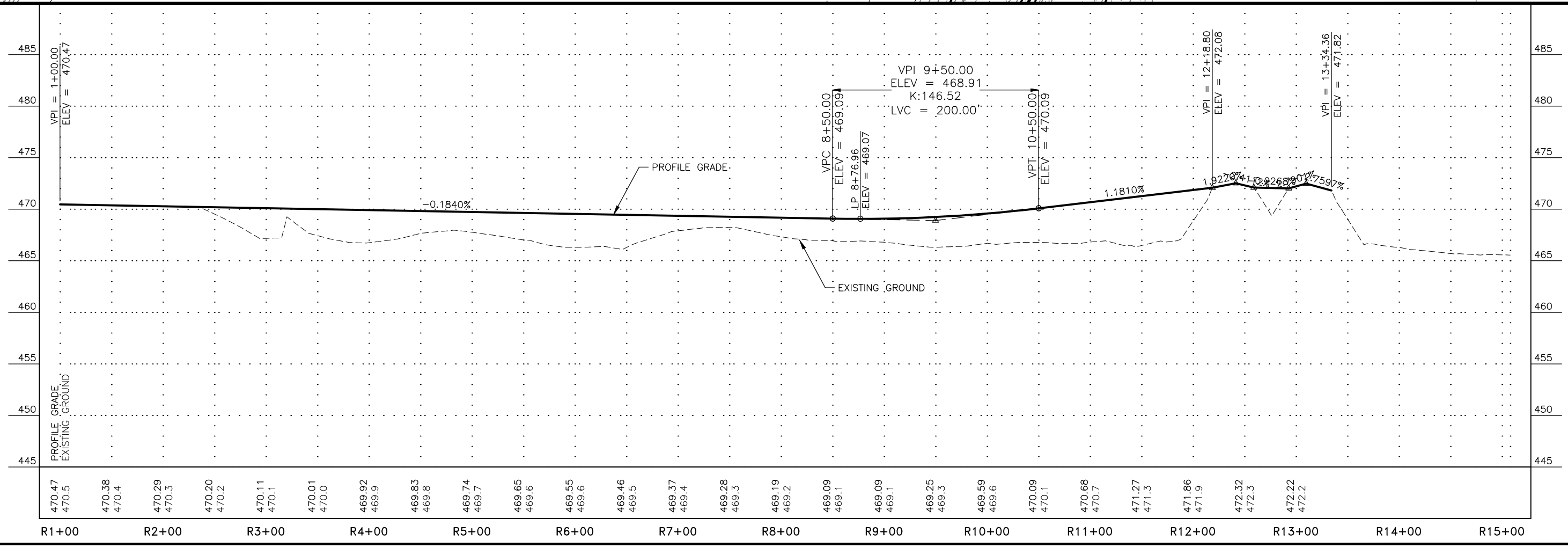
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.19	20





STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.20	20





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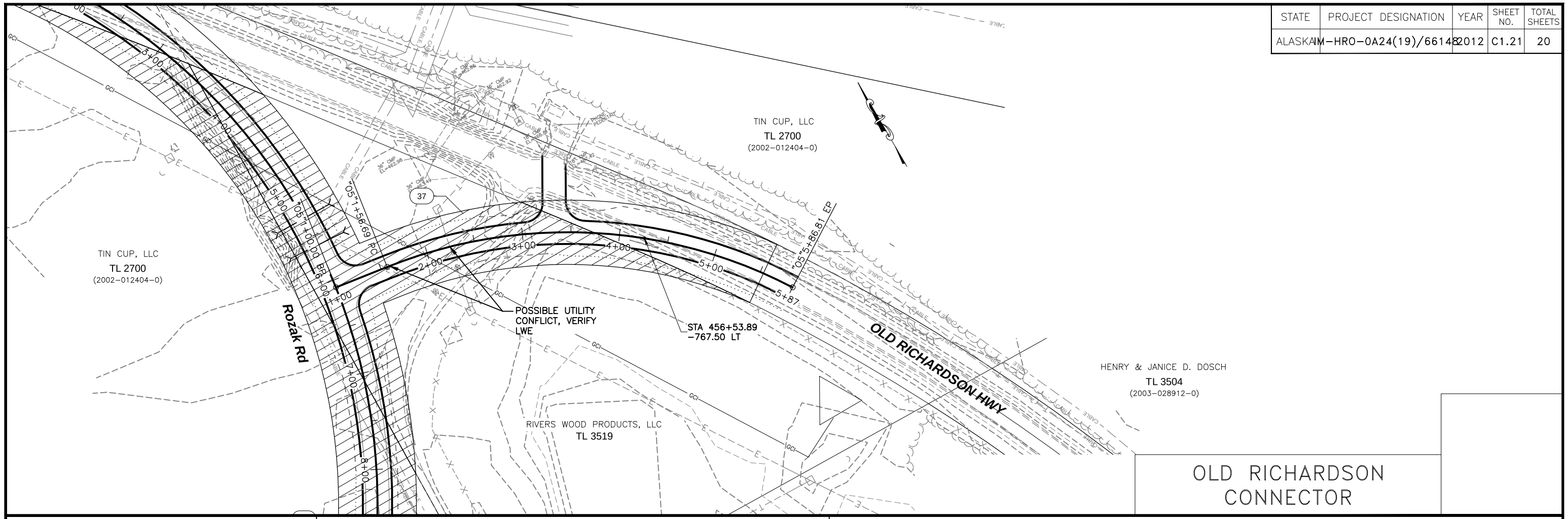
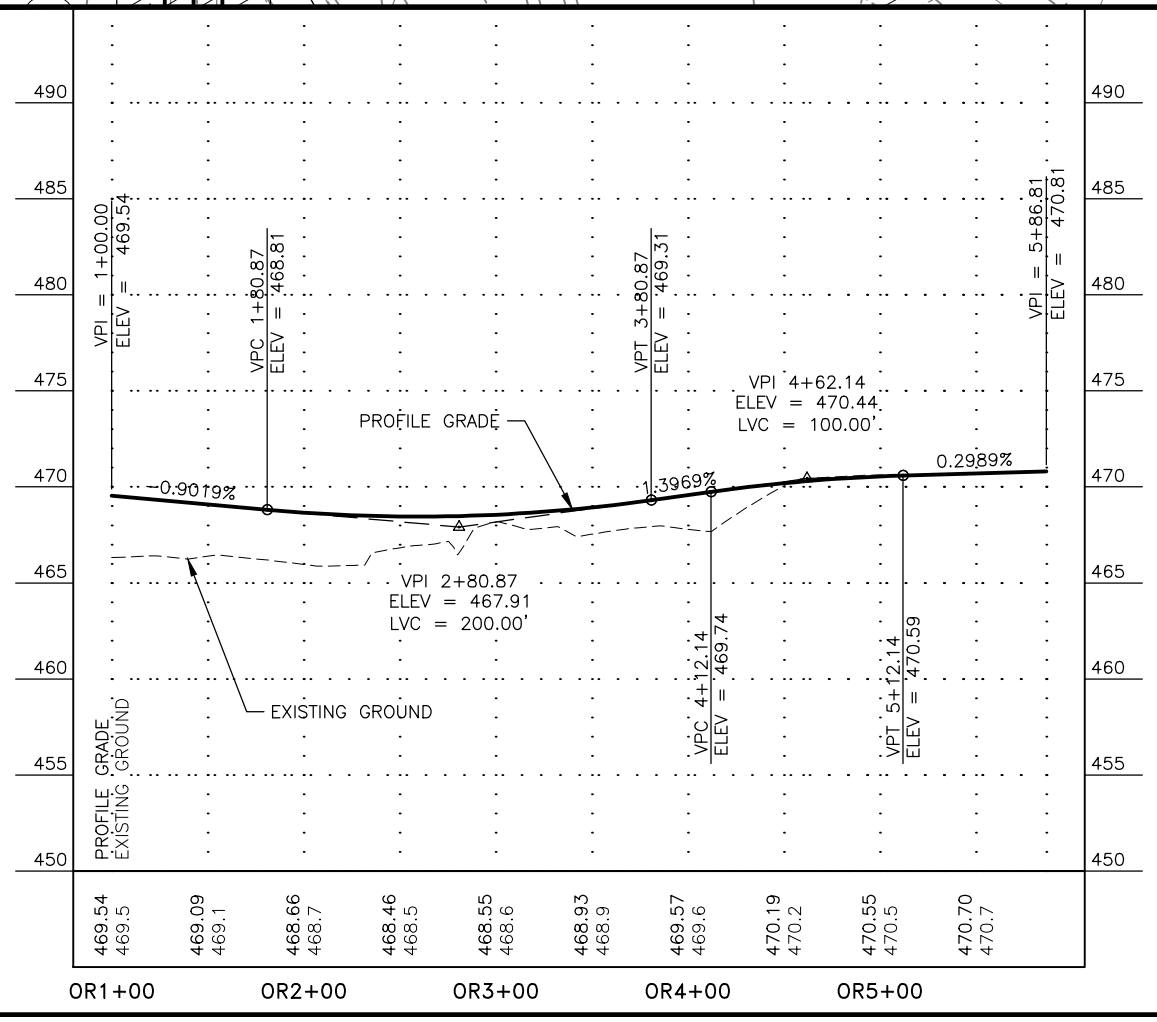
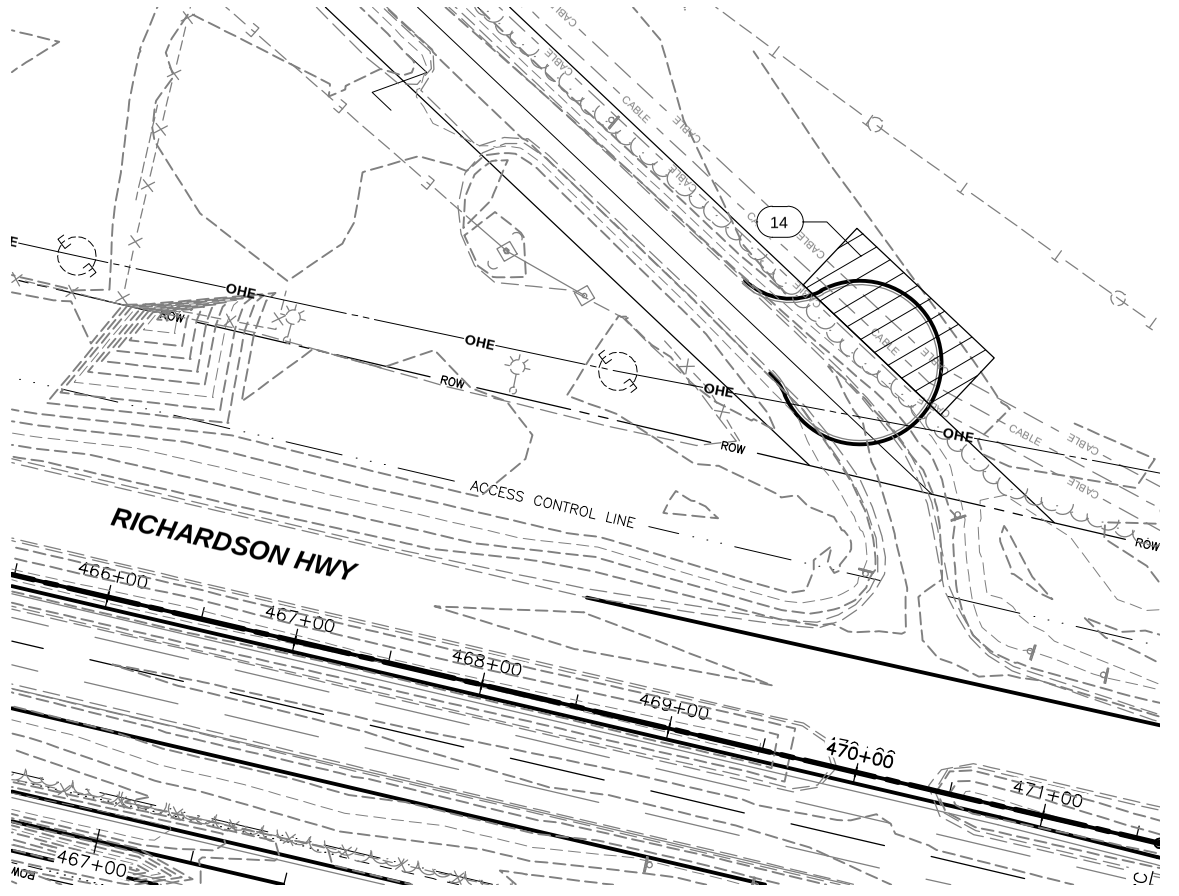
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	C1.21	20



OLD RICHARDSON CONNECTOR





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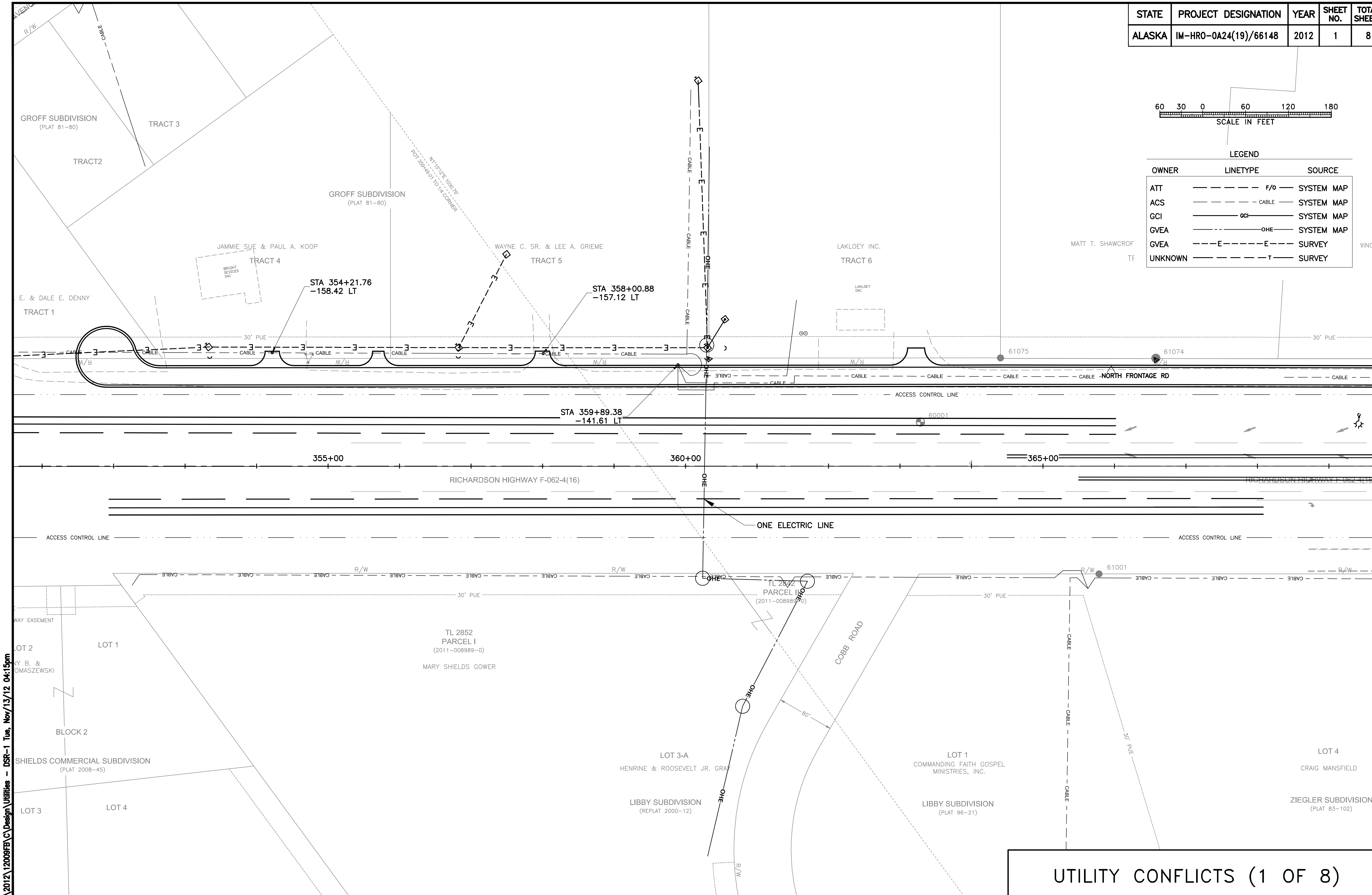
Utility Conflicts

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	1	8



60 30 0 60 120 180
SCALE IN FEET
GROFF SUBDIVISION
(PLAT 81-80)
TRACT 3
TRACT2
JAMMIE SUE & PAUL A. KOOP
TRACT 4
WAYNE C. SR. & LEE A. GRIEME
TRACT 5
LAKLOEY INC.
TRACT 6
MATT T. SHAWCROF
E. & DALE E. DENNY
TRACT 1
STA 354+21.76
-158.42 LT
STA 358+00.88
-157.12 LT
STA 359+89.38
-141.61 LT
30' PUE
CABLE
R/W
NORTH FRONTAGE RD
ACCESS CONTROL LINE
61075
61074
60001
61001
355+00
360+00
365+00
RICHARDSON HIGHWAY F-062-4(16)
ONE ELECTRIC LINE
OHE
TL 2852
PARCEL I
(2011-008989-0)
MARY SHIELDS GOWER
COBB ROAD
LOT 1
LOT 2
BLOCK 2
SHIELDS COMMERCIAL SUBDIVISION
(PLAT 2008-45)
LOT 3
LOT 4
LOT 3-A
HENRINE & ROOSEVELT JR. GRAY
LIBBY SUBDIVISION
(REPLAT 2000-12)
LOT 1
COMMANDING FAITH GOSPEL MINISTRIES, INC.
LIBBY SUBDIVISION
(PLAT 96-21)
LOT 4
CRAIG MANSFIELD
ZIEGLER SUBDIVISION
(PLAT 83-102)

LEGEND

OWNER	LINETYPE	SOURCE
ATT	— — — — F/O —	SYSTEM MAP
ACS	— — — — CABLE —	SYSTEM MAP
GCI	——— GCI ———	SYSTEM MAP
GVEA	— · — · —— OHE ——	SYSTEM MAP
GVEA	— — E — — — E — —	SURVEY
UNKNOWN	——— — — — T ——	SURVEY

UTILITY CONFLICTS (1 OF 8)

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	2	8

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E	SURVEY
UNKNOWN	T	SURVEY

RELOCATE POLE AND WIRES
RELOCATE POLE AND WIRES
STA 371+60.13 −123.43 LT
STA 371+89.61 −104.42 LT
ONE CROSSING WITH ELECTRIC AND TELEPHONE
STA 372+05.74 −0.12 LT
ONE TELEPHONE LINE
ONE ELECTRIC LINE
RELOCATE POLE AND UTILITY LINES
STA 384+65.42 106.65 RT

NORTH FRONTAGE RD
SOUTH FRONTAGE RD
ACCESS CONTROL LINE
RICHARDSON HIGHWAY F-062
WESCOTT GARDEN LANE (PRIVATE ROAD)
DAVISON STREET
LANNE ROAD
DODGE AVENUE
10' TELEPHONE EASEMENT
25' ACCESS EASEMENT (BK.266, PG.290)

JEAN & JEFFREY JONATHAN ELLIOTT
TRACT B
RICHARD VAN HATTEN
TL 2830
ALASKA CONTRACTING & CONSULTING, INC. and RICHARD VAN HATTEN
TL 2828 PARCEL II (2006-031714-0)
TL 2826
BLK 19
BLK 25
LOT C
LOT D
LOT E
DON R. MCADOO
LOT F
TL 2843 (2009-006644-0) BRUCE M. OSBORNE
TL 2806 (2011-011825-0) TESLIN CAPITAL, LLC and FINN-AL CRAFTS CONSTRUCTION, LLC
TL 2836
TL 2818
BERTA & HERMAN WALSKY
WALSKY PROPERTY (PLAT 2007-161)
S88°32'44"E 430.85'
POT 386+89.28 TO 1/4 CORNER

370+00 375+00 380+00 385+00

61073 60051 61072 60052 120007 60002 60053

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UTILITY CONFLICTS (2 OF 8)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	3	8

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E E	SURVEY
UNKNOWN	T	SURVEY

GILMORE SUBD.
(PLAT 131.970)

TAMARACK STREET

TL 2748 PARCEL VI
(2004-025176-0)

TL 2747 PARCEL V
(2004-025175-0)

TL 2746
PARCEL III
(2004-025176-0)

TL 2749
PARCEL iV
(2004-025175-0)

COLASKA, INC.

TL 2701
(2004-025177-0)

1/4 CORNER
61054

LOT 3
BLOCK 31

TL 2837
(BK.175, PG.280)

CINDY A. &
STEVE W. COLBURN

61058

30' GVEA EASEMENT
(BK.1141, PG.302)

RELOCATE YARD POLE/
UNDERGROUND SERVICE
DROP BEYOND ROW

STA 395+73.48
-143.76 LT

NORTH FRONTAGE RD

ACCESS CONTROL LINE

POT 390+22.92 TO 1/4 CORNER
N71°18'07"E 313.72'

390+00 395+00 400+00 405+00

RICHARDSON HIGHWAY F-062-4(18)

120888

60003

ONE CROSSING WITH
ELECTRIC AND TELEPHONE

SOUTH FRONTAGE RD

20043

61882

30' PUE

RELOCATE POLE

STA 395+42.37
122.65 RT

STA 402+64.90
122.30 RT

TL 2800
(2004-009386-0)
MID CITY ENTERPRISES, LLC

LOT 2A
ALASKA INDUSTRIAL LLC

MIDLAND ACRES SUBDIVISION
1ST ADDITION
PLAT 2004-27

UTILITY CONFLICTS (3 OF 8)

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	4	8

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E	SURVEY
UNKNOWN	T	SURVEY

PATTINSON SUBDIVISION
PLAT 190.812
LOT 2 BLOCK 1

PATTINSON SUBDIVISION
PLAT 190.812
LOT 2 BLOCK 1

COALASKA, INC.
TL 2703
(2002-025178-0)

C1/4 SEC 27 N11°18'10"E

MIDST EQUIPMENT, INC.
TL 2740

R/W

ACCESS CONTROL LINE

410+00 415+00 420+00 425+00

RICHARDSON HIGHWAY F-062-4(16)

60004

ONE CROSSING WITH
ELECTRIC AND TELEPHONE

120004 120003

STA 408+85.19
165.37 RT

SOUTH FRONTAGE RD

60057

61053

RELOCATE POLE

STA 409+56.17
207.28 RT

STA 414+37.34
209.60 RT

STA 418+34.40
210.70 RT

STA 424+96.64
121.18 RT

RELOCATE
GUY WIRE

POT 424+90.61 TO 1/4 CORNER

MIDLAND STREET

EL PASO STREET

30' PUE

DRIVEWAY EASEMENT

CABLE

OHE

24" CMP EL=463.77

24" CMP EL=463.86

24" CMP EL=465.99

LOT 1
LINDA F. & ARVIL A. STILL

LOT 2

LOT 3
LEE K. DROTZUR

LOT 4

LOT 1
JOHN CLIFFORD & JUSTIN
ROBERT COWLES

LOT 2
PATRICA D. & BRIAN FLEMMING

LOT 3
BRIAN FLEMMING

LOT 4
ALLEN L. BURT

LOT 1A
ARVIL A. STILL
SWIFT SUBD 1ST ADDITION
PLAT 2007-90

10'x10'
TRANSFORMER
EASEMENT

LOT 1A
SWIFT SUBD. 1st
PLAT 190.812

BADGER INDUSTRIAL PARK
PLAT 2006-176

BADGER INDUSTRIAL PARK
PLAT 2006-176

60'

33' SLE

S27 S34

UTILITY CONFLICTS (4 OF 8)

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	5	8

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E	SURVEY
UNKNOWN	T	SURVEY

61060
TIN CUP, LLC
TL 2700
(2002-012404-0)
MIDSTATE EQUIPMENT, INC.
TL 2740
(2002-0005490-0)
OHE
CABLE
33' SLE
R/W
ACCESS CONTROL LINE
437+43.36 PC
443+45.56 PT
60065
120006
430+00
435+00
440+00
445+00
RICHARDSON HIGHWAY F-062-4(16)
S88°45'45"E 549.36'
POT 431+71.03 TO 1/4 CORNER
60058
60060
60059
61004
61005
STA 430+72.13
150.66 RT
STA 434+42.95
148.52 RT
SHEDS
HOUSE
PAD
30' PUE
20' PUE
CORNER
61059
LOT 1
HIDE A WAY SELF STORAGE
CGH HOLDINGS INC.
MIDWAY INDUSTRIAL PARK
PLAT 81-134
LOT 2A
MIDWAY
PLAT 2003-53
LOT 2B
BETTE A. WATTS
LOT 2C
IRIS H.S. & EARL ROGER HOLLAND
LOT 3
MIDWAY INDUSTRIAL PARK
PLAT 81-134
DAVID FLENAUGH
MIDWAY AUTO
LOT 4
SOUTH FRONTAGE RD
SINCLAIR AVENUE
TL 3427
(2010-019746-0)
STEPHANIE WILLIAMS

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UTILITY CONFLICTS (5 OF 8)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	6	8

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E	SURVEY
UNKNOWN	T	SURVEY

STA 450+96.40
-856.26 LT

STA 452+72.66
-742.82 LT

STA 453+18.24
-695.69 LT

STA 454+30.22
-503.49 LT

STA 454+36.54
-700.07 LT

STA 456+53.89
-767.50 LT

STA 450+55.98
118.70 RT

STA 458+45.39
-0.34 LT

ONE ELECTRIC LINE

ONE TELEPHONE LINE

ELECTRIC AND TELEPHONE LINE

TIN CUP, LLC
TL 2700
(2002-012404-0)

RIVERS WOOD PRODUCTS, LLC
TL 3519

TL 3505
(2004-000439-0)

TL 3419
(Bk.99, Pg.113)

KELLY B. RIVERS TRUST
TL 3400
(2006-026635-0)

TL 3410
(2009-000135-0)
THOMAS W. MAHER LIVING TRUST

RICHARDSON HIGHWAY E-062-4(16)

ROZAK ROAD

OLD RICH HWY

SOUTH FRONTAGE RD

ACCESS CONTROL LINE

30' GVEA EASEMENT
(2010-009922-0)

450+00 455+00 460+00 465+00

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UTILITY CONFLICTS (6 OF 8)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	7	8

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E	SURVEY
UNKNOWN	T	SURVEY

HENRY & JANICE D. DOSCH
TL 3504
(2003-028912-0)

HENRY & JANICE D. DOSCH
TL 3504
(2003-028912-0)

FAIRBANKS NORTH STAR BOROUGH
TL 3514
CHENA LAKES DRAINAGE CHANNEL
(BK.140, PG.516)

ACCESS CONTROL LINE

RICHARDSON HIGHWAY F-062-4(16)

471+62.39 PC

483+88.47 PT

470+00

475+00

480+00

485+00

60006

6T062

ONE ELECTRIC LINE

STA 482+97.68
111.18 RT

TL 3515
(2009-025553-0)
ROBERT M. SCHMIT

TL 3515
(2009-025553-0)
ROBERT M. SCHMIT

TL 3513
CHENA LAKES DRAINAGE CHANNEL
(BK.140, PG.516)
FAIRBANKS NORTH STAR BOROUGH

SAILOR SUBDIVISION
(PLAT 2006-61)
TRACT A
LESLIE J. & JAMES A. HUFFMAN

UTILITY CONFLICTS (7 OF 8)

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	IM-HRO-0A24(19)/66148	2012	8	8

RAILSIDE

JACK D. & ERICA MACK

TL 3518
(BK.1095, PG.466)

CABLE
OHE
R/W
490+00
495+00
500+00
STA 489+81.50
121.07 RT
STA 485+19.12
123.35 RT
SOUTH FRONTAGE RD
DROP

60 30 0 60 120 180
SCALE IN FEET

LEGEND

OWNER	LINETYPE	SOURCE
ATT	F/O	SYSTEM MAP
ACS	CABLE	SYSTEM MAP
GCI	GCI	SYSTEM MAP
GVEA	OHE	SYSTEM MAP
GVEA	E	SURVEY
UNKNOWN	T	SURVEY

UTILITY CONFLICTS (8 OF 8)

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APPENDIX F

WAIVERS TO DESIGN STANDARDS

MEMORANDUM

State of Alaska
Department of Transportation & Public Facilities
Northern Region Preconstruction

TO: Longin Krol, P.E.
Preconstruction Engineer
Northern Region

DATE: December 12, 2012

FILE NO: V:\Hwy\66148 Rich Hwy Access Improvements\04 - PS&E\02 - DSR\Draft DSR\Waiver Request 66148.doc

THRU: Barry Hooper, P.E. BH
PD&E Chief
Northern Region

TELEPHONE NO: (907) 451-5361

FROM: Sarah E. Schacher, P.E. SS
Engineering Manager
Northern Region

SUBJECT: Richardson Hwy MP 353-357
Access Improvements
IM-HRO-0A24(19)/66148
Design Standards Waiver

I am requesting a waiver from the Alaska Highway Preconstruction Manual's (PCM) standard in Section 1000.1 which adopts the Transportation Research Board's (TRB) *Highway Capacity Manual* (HCM), 2000 as policy. As an alternative, I request permission to use the most current (2010) version of the HCM as the adopted standard for traffic analysis on this project.

The purpose of this project is to improve safety, capacity and access. The project corridor is within a high-speed divided four-lane interstate highway surrounding a heavily developed industrial area and our project proposes to reduce the frequency of intersections through consolidation with improved intersections that add acceleration/deceleration lanes, auxiliary lanes and frontage roads as appropriate.

The HCM 2010 incorporates over $5 Million of TRB research conducted since the publication of HCM 2000 to more effectively model traffic flow on highway projects. Our design consultant elected to model data in our project corridor using software that incorporates HCM 2010 because:

- While the unsignalized intersection methods in HCM2010 are the same as HCM2000, gap acceptance parameters were added for 6-lane streets. Because new acceleration and deceleration lanes create a wider typical section, the 6-lane gap acceptance parameters are considered more applicable to this project than the HCM2000 parameters.

- This analysis treated the project as a hybrid of freeway and interrupted flow facility elements. As such, the through lanes were modeled as freeway basic sections because of the high speeds and limited access. The freeway (basic section) analysis methods in HCM2010 have been improved from HCM2000 and now include a 75 mph free-flow speed which was used for this analysis.

Our Regional Traffic & Safety Engineer supports this request. Additionally, our headquarters Design & Engineering Services division indicates the HCM 2010 will be adopted by approximately June 2013.

Approved: Longin K Date: 12/12/12
Longin Krol, P.E.
Preconstruction Engineer

cc: Pam Golden, P.E., Traffic & Safety Engineer, Northern Region

SES/smd SMD