IOWA DOT
US 30 Planning Study

US 30 Cedar and Clinton Counties
PLANNING AND ENVIRONMENTAL LINKAGES (PEL) STUDY

Vision Document

Location and Environment Bureau | June 2020

US 30 Planning and Environmental Linkages (PEL) Study

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EXECUTIVE SUMMARY

The Iowa Department of Transportation (DOT) is performing a transportation-planning study, referred to hereafter as the Study, to identify current and future transportation needs for the portion of the US Highway 30 (US 30) between Charles Avenue (just east of Lisbon) in Cedar County and near 260th Avenue (just west of DeWitt) in Clinton County. The Study is being performed following the Federal Highway Administration (FHWA) Planning and Environmental Linkages (PEL) model, which represents an approach to transportation-planning decision making that includes environmental, community, and economic goals early in project development. The Study focus on three overarching goals: (1) determine the number of travel lanes needed to provide safe, efficient, and reliable travel in the future and a range of possible improvement alternatives, (2) study and determine the need for possible bypasses around local communities within the Study corridor, and (3) prioritize corridor improvements needs.

The Study consists of a series of separate analyses and standalone reports that evaluate the corridor's goals and objectives, existing infrastructure conditions, study area features and possible constraints, past safety performance and crash history, future traffic volumes and travel demands, a range of possible improvement alternatives (including consideration of bypass roadways), public opinion and input, and possible connections between highway expansion and rural economic growth. The findings of these various studies and public outreach activities are culminated in this Vision Document, which sets forth recommendations for future study and investment in the US 30 Study corridor.

RECOMMENDATION: GOAL 1—ROADWAY CROSS SECTION AND RANGE OF IMPROVEMENT ALTERNATIVES

The findings of the US 30 PEL Study recommend that a Super-2 highway, with regularly spaced passing lanes throughout the corridor, is the appropriate roadway section for future corridor-wide improvement. A typical passing-lane spacing of 4 to 5 miles can result in a set of passing lanes, one for each direction of travel, between adjacent communities. Passing lanes would be limited to rural areas of the Study corridor, allowing faster vehicles to pass slower moving vehicles without needing to cross into the opposing lane of traffic. In urban areas, a three-lane roadway with a center two-way left-turn lane is recommended where significant impacts would not occur with needed roadway widening. In addition, other improvements that could be included to supplement the Super-2 highway features include rumble strips, turn lanes at intersections, improved shoulders, and other low-cost strategies with proven safety and operational benefits on rural highways.

Basis for Super-2 Recommendation

- Public supports corridor enhancement.
- Future projected traffic can be served with a two-lane highway with reserve capacity still present.
- A three-lane roadway can be accommodated through the local communities without the need for bypass alignments.
- Iowa DOT study suggests improving an existing two-lane highway to a Super-2 highway is estimated to cost 15 to 20 percent of what would be required to expand the highway to four lanes.
- Economic data do not support the hypothesis that highway expansion drives new economic growth.

RECOMMENDATION: GOAL 2—ON-ALIGNMENT IMPROVEMENTS AND BYPASS ROADWAYS

With the recommendation of a Super-2 highway, this Study also recommends that improvements to the US 30 corridor generally follow the existing roadway alignment; no bypasses around any of the seven local communities within the Study corridor are recommended at this time. However, at spot locations, a shift in the current US 30 alignment may be necessary to maintain traffic during construction of improvement projects (like at bridge locations) or where additional separation from the Union Pacific (UP) Railroad is needed to construct westbound passing lanes or improve US 30 traffic operations when trains are present at closely spaced at-grade rail crossings. These alignment shifts will generally be minor and still closely follow the existing highway. Consideration of a larger alignment shift and/or new alignment south of existing US 30 around Mechanicsville is recommended for further study to address concerns and observations related to the UP Railroad at this location.

Basis for No-Bypass Recommendation

- Super-2 improvements can be incorporated with minimal impact to existing properties in the local communities, thus avoiding the need for impactful bypass roadways around the communities.
- Maintaining traffic on existing US 30 minimizes disruption of travel patterns in the local communities.
- Maintaining traffic on existing US 30 minimizes the risk of an improved corridor negatively affecting existing businesses along US 30.

RECOMMENDATION: GOAL 3—CORRIDOR PRIORITIZATION

Implementing Super-2 highway improvements across a 40-mile corridor under one project may be cost prohibitive considering other transportation needs in the state and available construction funding. Therefore, an implementation approach that phases the Super-2 highway improvements over a period of time is recommended. Super-2 highway and other warranted improvements could be incorporated as opportunities arise to combine available construction funding with regular maintenance and rehabilitation projects planned within the Study corridor. With this approach, initial Super-2 improvements would likely occur in areas where existing pavement is deteriorating and/or existing bridges need to be replaced. Other factors to consider when phasing improvements throughout the corridor include issues related to the UP Railroad, locations with limited passing opportunities where the traffic volumes are the greatest, and support for current businesses and farm-to-market commodity transport.

Basis for Prioritization Recommendations

- Aside from aging infrastructure, existing US 30 meets today's and projected future travel needs safely, efficiently, and reliably.
- Available construction funding may require a phased implementation approach.
- Public concerns and noted needs include the proximity of UP Railroad and presence of agricultural equipment on US 30.
- Future projected traffic volumes are expected to be greater on the western and eastern ends of the study corridor rather than in the central section of the corridor.

RECOMMENDED NEXT STEPS

Findings, observations, and alternatives developed as part of this PEL Study will serve as the foundation for future planning and engineering studies. The US 30 PEL Study team considered several Super-2 highway configurations, with the purpose of identifying the following: 1) whether

passing lanes could be accommodated between each of the local communities, 2) what constraints or alignment shifts may be needed in the future, 3) where placement of passing lanes may be most favorable within each highway section, and 4) what alternatives are possible to aid traffic flow through the communities and major intersections. Future studies are recommended to include the following:

- **Recommended Future Study Area focus.** The US 30 PEL Study Area was narrowed throughout the Study duration as findings and recommendations were reached resulting in the Recommended Future Study Area. This Recommended Future Study Area is intended to provide a defined area of focus for future environmental and engineering study. It may be necessary to adjust these recommended future study limits as alternatives are further developed and more detailed field studies are performed.

- **Balanced highway segment context and corridor-wide study approach.** The next phase of study is recommended to continue focus on the full US 30 PEL Study corridor to identify the most optimal combination of passing lane locations for the full Super-2 highway corridor. Once the optimal passing lane locations are identified for the full corridor, smaller groups of highway segments or individual locations can begin to be designed and studied independently.

- **Continued proactive public involvement and outreach**. Continue proactive outreach to keep stakeholders engaged and informed, and continue sharing valuable information to identify the optimal Super-2 highway layout for the corridor. This outreach includes coordination with environmental resource agencies, as needed, and UP Railroad.

- **Phased implementation to balance transportation needs with available construction funds**. To match available construction funding with the transportation needs across the State, a phased Super-2 highway implementation for the US 30 corridor between Lisbon and DeWitt may be necessary. Early improvements should take advantage of planned resurfacing, restoration, or rehabilitation projects in the corridor as an opportunity to add passing lanes and other Super-2 highway improvements. Initial focus is recommended on the section of the corridor west of Clarence (poor pavement conditions, high volume of traffic, and limited passing opportunities compared to other sections of the corridor), but individual sections can be realigned within the prioritization framework to best match available construction funds.

- **Railroad Opportunities and Coordination.** Today, an average of 60 trains per day pass through the Study corridor with the potential of future growth. Because of the number of at-grade crossings closely spaced to existing US 30, the UP Railroad should remain a key stakeholder when considering US 30 improvements during future study. Future study should examine the following: (1) future rail demand; (2) any railroad expansion or other improvement plans; (3) closely spaced at-grade crossing improvements that may be required as part of any US 30 highway improvement; and (4) improvements that could provide mutual benefit, particularly at heavily traveled at-grade railroad crossings (like those at Mechanicsville), which could result in additional cost-sharing opportunities and funding sources (Federal Railroad Administration, FHWA, various safety funds and programs, grants, etc.).

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ACRONYMS AND ABBREVIATIONS

3R	resurfacing, restoration, or rehabilitation
AADT	Annual Average Daily Traffic
AM	morning
DOT	Department of Transportation
ICE	Infrastructure Condition Evaluation
FHWA	Federal Highway Administration
LOS	level of service
mph	miles per hour
NEPA	National Environmental Policy Act
PEL	Planning and Environmental Linkages
PIM	Public Information Meeting
PIMA	Public Information Management Application
PM	afternoon
TWLTL	two-way left-turn lane
US 30	United States Highway 30
UP	Union Pacific
vpd	vehicles per day

1 INTRODUCTION

The Iowa Department of Transportation (DOT) is performing a transportation-planning study, referred to hereafter as the Study, to identify current and future transportation needs for the portion of the US Highway 30 (US 30) in Cedar and Clinton Counties in eastern Iowa. This Vision Document represents the conclusion of the US 30 Planning and Environmental Linkages (PEL) Study by summarizing the overall study findings and providing recommendations and a planned strategy for approaching future study and investment in the Study corridor.

1.1 STUDY OVERVIEW

The Study is being performed following the Federal Highway Administration (FHWA) PEL model. This model represents an approach to transportation-planning decision making that includes environmental, community, and economic goals early in the planning stage, which:

- Minimizes duplication of effort.
- Promotes efficient and cost-effective solutions and environmental stewardship.
- Reduces delays in project implementation.

The PEL model allows for the study of the corridor as a whole and the ability to make corridor-wide decisions that will shape the future investment and improvement projects within the corridor.

This US 30 PEL Study consists of a series of smaller topical studies and public outreach activities, with the various study results and findings culminating in this Vision Document. The US 30 PEL Study includes the following technical reports:

- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL) Study – Public Involvement Plan (Jacobs, 2019d).
- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL) Study – Existing Crash and Safety Performance Report (Jacobs, 2019a).
- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL) Study – Goals and Guiding Principles (Jacobs, 2019c).
- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL Study) – Existing Conditions Memorandum (Jacobs, 2019b).
- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL Study) – Forecast Future Traffic and Corridor Sizing (Jacobs, 2019e).
- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL Study) – Alternatives Report (Jacobs, 2019f).
- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL Study) – Highway Expansion Economic Case Study Report (Jacobs, 2020).

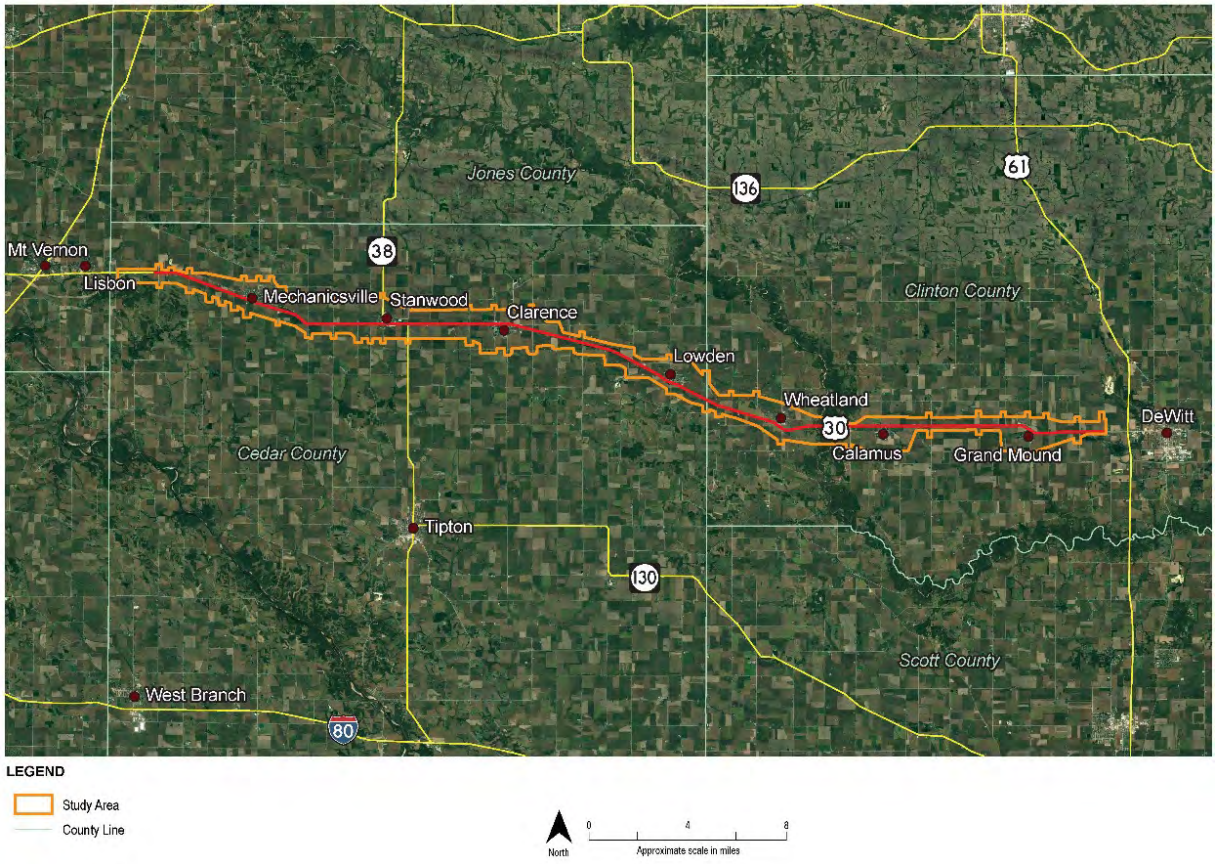
Public comment and input were accepted throughout and were thoroughly considered during the Study.

1.2 STUDY AREA

US 30 is a primary highway that spans the State of Iowa and is part of the Iowa Commercial and Industrial Network.[1] Sections of US 30, including portions within the area of this Study, are designated as part of the Lincoln Highway Heritage Byway Corridor.

Figure 1-1 shows the US 30 PEL Study area which begins east of Lisbon near the intersection with Charles Avenue and continues east to near the 260th Avenue intersection just west of the US 30/US 61 interchange at DeWitt. The US 30 PEL Study corridor is primarily rural in nature and passes through or near the corporate limits of seven small Iowa communities: Mechanicsville, Stanwood, Clarence, Lowden, Wheatland, Calamus, and Grand Mound. The Study corridor includes a crossing of the Wapsipinicon River between Wheatland and Calamus and the Union Pacific (UP) Railroad generally parallels US 30 for much of the corridor.

Figure 1-1. US 30 PEL STUDY AREA



[1] The Commercial and Industrial Network is a subset of roadway networks from the State's Primary Road System that is intended to improve the flow of commerce and better connect Iowa with regional, national, and international markets with convenient, efficient, and safe travel.

Existing US 30 within the Study area is a two-lane rural highway that will have connections to a four-lane divided roadway section on both ends of the corridor. At the western terminus, US 30 will transition to a four-lane divided highway as it bypasses the cities of Mount Vernon and Lisbon; this bypass was opened to traffic in late 2019. West of Mount Vernon, US 30 remains a four-lane divided highway through the Cedar Rapids metro area. At the Study corridor's eastern terminus, US 30 transitions to a four-lane highway just west of the junction with US 61 at DeWitt. To the east, US 30 maintains the four travel lanes to Clinton before reducing back to a two-lane roadway at the crossing of the Mississippi River; US 30 maintains a two-lane highway section into Illinois for more than 20 miles before intersecting with Interstate Highway 88.

1.3 US 30 GOALS AND GUIDING PRINCIPLES

The goals and outcomes of the US 30 PEL Study are intended to closely align with the improvement strategies and focus areas defined in the *Iowa in Motion 2045 State Transportation Plan* (Iowa DOT, 2017), including the following:

- Right-size the highway system and apply cost-effective solutions to locations with existing and anticipated issues.
- Target investments to address capacity needs at locations with forecasted congestion.
- Target investments to address mobility and safety needs on critical two-lane routes.
- Target investments to address freight needs at locations with measured mobility issues.
- Target investments to address condition needs at locations with measured structural and service issues.
- Reduce the number of overall major crashes and the number of secondary crashes.
- Maximize the use of existing roadway capacity.

This US 30 PEL Study addresses three overarching study goals:

1. Identify the future roadway cross section needed to meet future travel needs and develop a range of possible improvement alternatives.
2. Provide recommendations for maintaining US 30 on its current alignment or potentially bypassing one or more of the communities along the Study corridor.
3. Provide recommendations for prioritization of possible improvements within the Study corridor.

The strategies and roadmap identified, prioritized, and recommended in this Vision Document have been developed to a level that will allow the Study findings to serve as the foundation for future project development, including National Environmental Policy Act (NEPA) studies. Once the decision is made to fund and program individual improvement projects, this Vision

Document will lead to commencement of future NEPA studies without delay or the need for a backward-looking study.

This Study was performed to address these goals by following three primary guiding principles:

1. Good Stewardship—providing a safe and efficient transportation system while also being good environmental stewards and appropriately using Iowa tax dollars.

2. Transparency—providing an open and transparent project process where findings are shared publicly, and stakeholders have continuous opportunities to offer input on the project.

3. Design Principles—maintain a transportation network that aligns with core design principles and anticipates needs to the year 2045.

2 EXISTING AND FUTURE CONDITIONS ANALYSIS

This section summarizes the findings of the various existing and future conditions studies. For additional details, refer to the following technical reports:

- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL) Study – Existing Crash and Safety Performance Report (Jacobs, 2019b).

- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL Study) – Existing Conditions Memorandum (Jacobs, 2019b).

- US 30 Cedar and Clinton Counties Planning and Environmental Linkages (PEL Study) – Forecast Future Traffic and Corridor Sizing (Jacobs, 2019e).

2.1 INITIAL PUBLIC INPUT AND STAKEHOLDER CONCERNS

Early in the Study, a series of small-group meetings were held with the local jurisdictions and other US 30 stakeholders; additional small-group meetings were scheduled throughout the Study development as needed. The goals of these meetings were to share the PEL Study process and objectives and solicit stakeholder input and perspectives on the current functionality and future needs of the US 30 corridor. Table 2-1 lists the small group meetings that were held.

Table 2-1. US 30 PEL SMALL GROUP MEETINGS

Stakeholder Group	Meeting Date	Stakeholder Group	Meeting Date
City of Grand Mound	August 13, 2018	Cities of Mechanicsville, Stanwood, and Clarence	August 16, 2018
US 30 Coalition of Iowa	August 14, 2018 and April 4, 2019	East Central Intergovernmental Association (ECIA)	August 17, 2018
Clinton County	August 16, 2018	Cedar County and City of Lowden	August 17, 2018
City of DeWitt	August 16, 2018	City of Lisbon	September 6, 2018
East Central Iowa Council of Governments (ECICOG)	August 16, 2018	Prairie Rivers of Iowa	July 10, 2019

Efforts were made to schedule meetings with the Cities of Wheatland and Calamus; both communities declined to participate.

A variety of input was received at these small group meetings; Appendix A contains a full summary of each of the small-group meetings. The following common themes were heard at these initial outreach meetings:

- The existing two-lane highway works today, but widening to a four-lane roadway in the future would help attract new businesses and residential development to the area.
- Bypass roadways may be needed to minimize impacts of highway widening within the various communities and could lead to opportunities for new development along the new highway, but could also hurt existing businesses; bypasses need to be considered on a community-by-community basis.
- Safety and crashes are a concern at some local road intersections and through the various communities; the growing number of trucks using US 30 worsens the current safety condition.
- There are safety concerns with rural intersections on a four-lane divided highway.
- The UP Railroad disturbs the flow of US 30 traffic, especially at Mechanicsville, when a train is present.
- The communities in the corridor serve as bedroom communities today and would benefit from residential growth with residents commuting to urban centers (Cedar Rapids, Clinton, Quad Cities) for work; areas around the communities will likely remain agriculturally oriented.
- Travel along existing US 30 is unreliable; slow-moving vehicles and farm equipment, disruptions created by the UP Railroad, and increased traffic and traffic signals in Linn County lead to this unreliability.

- Improvements to US 30 should be a higher priority than I-80; US 30 can serve as a relief to I-80.
- Some traffic that "belongs" on US 30 diverts to I-80 because US 30 is unreliable, and navigation systems such as Google Maps direct traffic to I-80 instead of US 30.
- Perception that industry site selectors hesitate to consider Clinton County for certified sites (larger sites) because there is not a four-lane highway.
- Movement of farm commodities to markets is important for the region and the state; grain-handling facilities and trucking are common and growing industries in the corridor.
- Current and future traffic projections alone may not warrant highway expansion.
- US 30 has historical significance and needs to be preserved; maintaining a two-lane rural highway matches the historical features of the original Old Lincoln Highway.

2.2 EXISTING INFRASTRUCTURE CONDITIONS AND FEATURES

The existing conditions analysis reviewed the existing corridor's infrastructure conditions and features. Three key findings of the existing conditions analysis are:

- The existing US 30 roadway generally meets current engineering design practices and policies.
- The UP Railroad parallels US 30 for the majority of the US 30 PEL Study corridor with 41 at-grade railroad crossings on local side roads within 0.5 mile of US 30; 19 at-grade crossings are within 150 feet of US 30. The crossings very near US 30 can lead to disruptions in US 30 traffic, particularly around Mechanicsville, when trains are present. The close spacing also creates situations where large vehicles or those pulling trailers on the local side road stop on or straddle the railroad tracks before entering or crossing US 30.
- The existing US 30 infrastructure is aging and will need repair, rehabilitation, or reconstruction at some point in the future:
  - Poor pavement conditions are present, especially between Lisbon and Clarence.
  - No existing bridges are currently weight restricted or considered deficient, but two are scheduled for replacement in Iowa DOT's 2020-2024 Iowa Transportation Improvement Program (Iowa DOT, 2019): the US 30 bridge over the UP Railroad (2024) and the US 30 bridge over the Wapsipinicon River (2023).

2.3 CRASH HISTORY AND SAFETY

The crash history and safety analysis included the last 5 full years (2013 to 2017) of crash data available at the time of the analysis. Corridor statistics were compared against statewide crash statistics for similar roadways in Iowa, and various corridor-specific crash trends were studied. Only one location was identified as having crashes greater than what would be expected when compared to other similar Iowa roadways—the section between Wheatland and the

Wapsipinicon River experienced an above average rate of crashes, with the majority being collisions with animals.

While not statistically significant, clusters of crashes did occur near some horizontal curves, at some intersections with paved county roads, and within the communities where more frequent access and conflict points can be expected. Lane departure and cross-centerline crashes did occur, but the data show a drastic decrease in these types of crashes east of Clarence following a resurfacing project that included the addition of rumble strips in 2014. Table 2-2 lists the 10 locations within the Study corridor that experienced the greatest number of crashes between 2013 and 2017.

Table 2-2. LOCATIONS WITH GREATEST CRASH FREQUENCY, SEVERITY, AND/OR CRASH RATE (2013 to 2017)

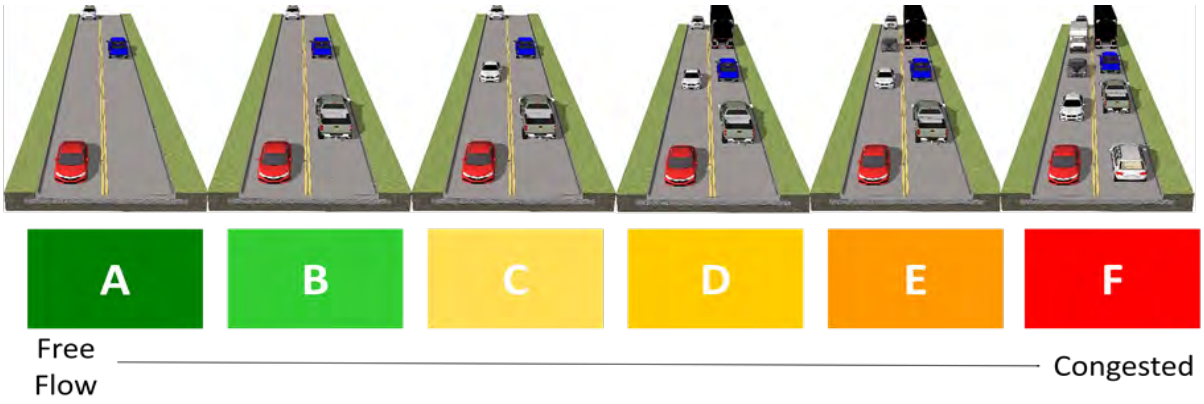
Roadway Segment (Segments Listed from West to East)	Crash Characteristics
US 30 MP 270.9 to MP 271.9	• 12 total crashes with 4 injury (minor or possible injury) crashes • 4 of the 12 total crashes involved either animal collisions or alcohol • 2 of 3 intersection crashes resulted in injuries
US 30 MP 273.9 to MP 274.9 at Mechanicsville	• 9 total crashes with no injury crashes • 6 of the crashes were multi-vehicle and 3 were intersection-related • Stakeholder input suggests crashes commonly occur when trains are present
Mechanicsville city limits to approximately 1,500 feet east of Grant Ave. (MP 275.0 to MP 275.9)	• 5 of 8 total crashes resulted in injuries, with the majority of the crashes being a combination of cross-centerline, sideswipe same direction, and lane departure crashes • 3 crashes were located near curves in the roadway • 4 crashes occurred during dark conditions and without roadway lighting present; 3 were animal-related
US 30 MP 279.9 to MP 280.9 at Stanwood	• 10 total crashes of which 2 had possible injuries • 6 of the 10 crashes were intersection-related (3 at the IA 38 intersection)
Stanwood east city limit to 4,400 feet east of IA 38. (MP 280.9 to MP 281.9)	• 8 of 9 total crashes occurred at the US 30 intersection with Monroe Ave./IA 38, with most resulting from a vehicle failing to yield right-of-way (nearly 70% of the traffic on the IA 38 leg of the intersection turns left onto US 30)
US 30 MP 283.9 to 284.9 in Clarence	• 6 of 9 total crashes were injury crashes • 3 crashes were intersection related and right angle/broadside collisions

Table 2-2. LOCATIONS WITH GREATEST CRASH FREQUENCY, SEVERITY, AND/OR CRASH RATE (2013 to 2017)

Roadway Segment (Segments Listed from West to East)	Crash Characteristics
2.6 miles west of Lowden city limits to 0.25 miles east of Hoover Highway (MP 288.9 to MP 292.6)	• 7 of 27 total crashes were intersection-related, with most at the US 30/ Herbert Hoover Highway intersection • One fatal crash (the only one in the study period) occurred just west of Lowden and resulted from cross-centerline head-on collision • 8 animal-related crashes and 2 crashes involving alcohol
Wheatland, 500 feet west of 130th Ave. to 700 feet east of 158th Ave. (MP 296.9 to MP 299.9)	• 32 total crashes on this segment of roadway, with most resulting in no injuries or minor injuries • 13 of the 32 crashes were intersection-related, with over 7 occurring at the US 30/130th Ave/County Road Y4E intersection in Wheatland • 14 animal-related crashes near the Wapsipinicon River and the Syracuse Wildlife Management area
US 30 MP 306.9 to MP 307.9 in Grand Mound	• 3 of 10 total crashes were injury crashes • 4 crashes were lane-departure crashes, and 5 were intersection-related • Clusters of crashes occurred on or near the roadway curves in Grand Mound
US 30 MP 308.9 to MP 310.1	• 13 total crashes 4 of which were injury crashes (2 major injury crashes) • 4 crashes were intersection-related, 5 were rear-end collisions, and 2 were cross-centerline collisions • Iowa DOT is reconstructing the US 30/260th Avenue intersection to add turn lanes (construction ongoing at the time of this Study)

2.4 EXISTING AND FUTURE TRAFFIC OPERATIONS AND TRAVEL RELIABILITY

Figure 2-1. EXAMPLE DEPICTION OF Level of Service THRESHOLDS ON A TWO-LANE HIGHWAY



The existing US 30 corridor serves between 2,050 and 4,350 vehicles per day (vpd). Annual Average Daily Traffic volumes on the existing two-lane highway are projected to grow to 3,100 to 7,900 vpd by the year 2045.

Today, the quality of traffic operations, or level of service (LOS), within the Study corridor is at acceptable levels, with the majority of the corridor (intersections and roadway segments) operating at LOS B or better during peak travel times. The most heavily traveled sections of the Study corridor, from west of Mechanicsville to Stanwood, operate at LOS C during peak periods, just below the LOS B performance threshold. Under predicted 2045 traffic, the corridor is still expected to operate acceptably at LOS C or better during periods when traffic volumes are the greatest. The findings of the operational studies suggest that the existing two-lane highway will continue to effectively serve the projected travel needs today and into the future with reserve capacity available to accommodate traffic beyond what is currently predicted.

An operational sensitivity analysis was performed as part of this Study to estimate the level of reserve capacity available in the existing two-lane highway corridor. Table 2-3 summarizes the growth beyond current predicted future volumes that would need to occur before the existing two-lane highway is expected to degrade operationally and near capacity (LOS E); future traffic would need to more than triple what is currently predicted before operations consistent with LOS E would be expected.

Table 2-3. US 30 TWO-LANE HIGHWAY LOS SENSITIVITY ANALYSIS

US 30 Segment	LOS	Growth Required Beyond Predicted 2045 Traffic Volumes*
Mechanicsville to Stanwood	D	120%-195%
	E	205%-310%
	F	425%-440%
Stanwood Corporate Limits	D	205%-260%
	E	285%-360%
	F	375%-530%
Lowden to Wheatland	D	230%-410%
	E	370%-675%
	F	640%-1,180%

*Considers both eastbound and westbound traffic during daily peak hours.

A common message received from project stakeholders was that travel through the Study corridor is currently not reliable, with vehicle queues forming and limited abilities to pass slower-moving vehicles. Stakeholders noted that slower-moving farm equipment is common on US 30 throughout the year. The existing conditions study also noted that marked passing opportunities of less than 1 mile in length are present in parts of the corridor, namely west of Mechanicsville, between Mechanicsville and Stanwood, and near Grand Mound. At these locations, the presence of oncoming traffic can limit a driver's opportunity to pass a slower moving vehicle.

INRIX data, crowd-sourced third-party data collected from real-time data sources like anonymous cellular phones, connected vehicles, and other GPS devices, was gathered and evaluated to judge actual travel times and speeds within the corridor. Table 2-4 summarizes findings from the INRIX data. As shown, average travel speeds in the corridor, from Lisbon to DeWitt, are nearly 55 miles per hour (mph). This includes the sections of the corridor that pass through the communities with reduced posted speed limits, indicating that in the rural areas of the corridor, travel speeds are at or above the posted speed limit. In addition, Table 2-4 shows that current travel statistics are consistent regardless of the time of day. When evaluating the individual segments of the corridor, the lowest travel speeds occur over the roadway sections that include and are between the communities of Stanwood and Clarence.

Traffic simulations were developed and calibrated with the INRIX data to see how the corridor would perform under 2045 future traffic predications. The simulation results of travel between Lisbon and DeWitt suggest that 2045 average travel speeds can be expected to decrease by less than 1 mph with an associated travel time increase of less than 1 minute compared to existing conditions.

Table 2-4. SUMMARY OF INRIX SPEED AND TRAVEL TIME DATA FOR FULL STUDY CORRIDOR

Weekday Time Period	Eastbound Travel		Westbound Travel	
	Speed (mph)	Time (minutes)	Speed (mph)	Time (minutes)
Full Day: 12 AM – 11 PM	54.2	47.5	54.4	47.5
Daytime: 7 AM – 9 PM	54.4	47.4	54.4	47.5
Overnight: 10 PM – 6 AM	54.1	47.7	54.3	47.6
Morning Commute: 7 AM – 9 AM	54.6	47.3	54.6	47.3
Afternoon Commute: 4 PM – 6 PM	54.7	47.2	54.7	47.3

Notes:

AM = morning

PM = afternoon

This data suggest that travel today is reliable and consistent and the same can be expected under future traffic predications. While there may be instances where traffic speeds are reduced due to a slower-moving vehicle, data indicate that this is an exception and not the standard condition.

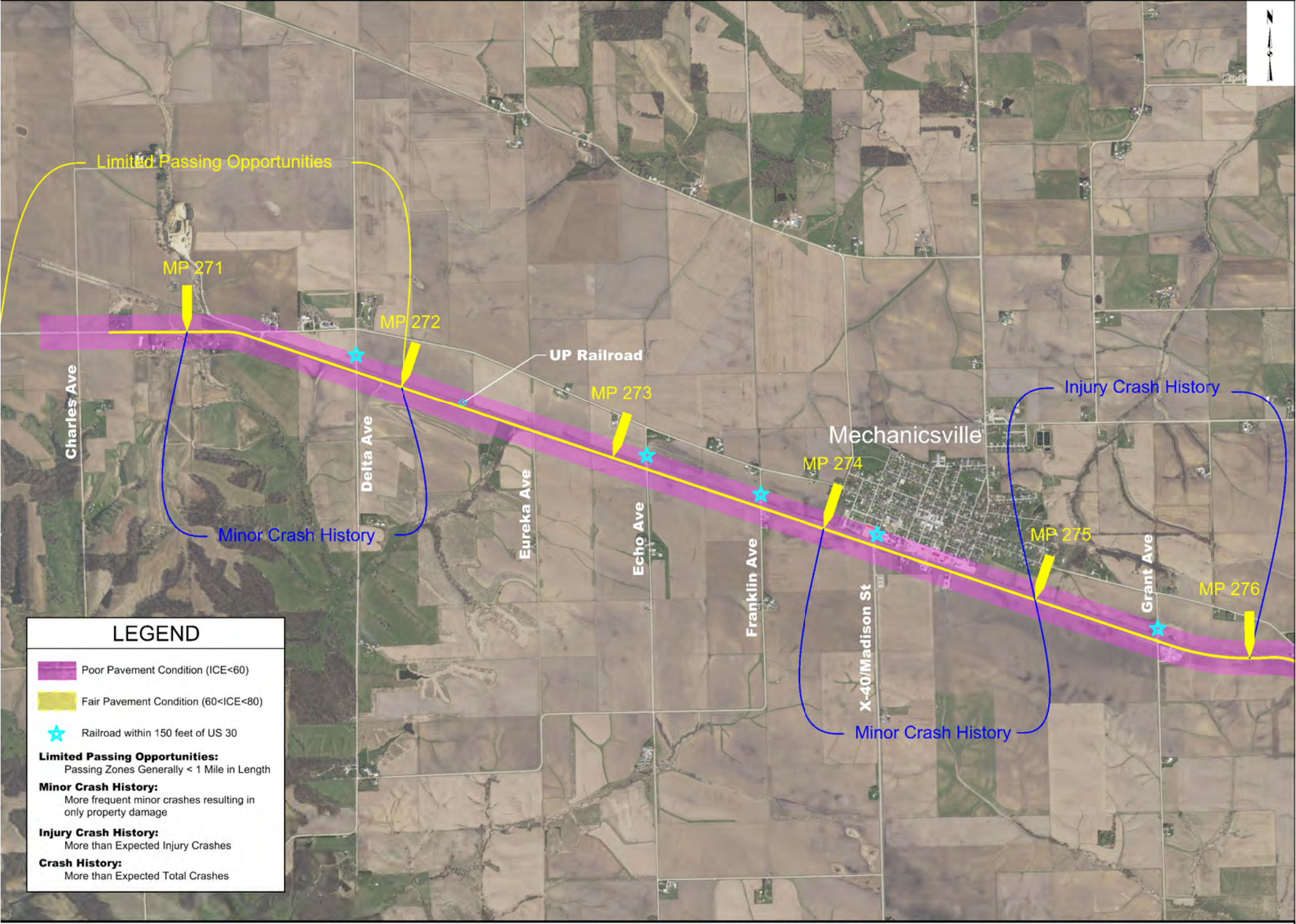
2.5 SUMMARY OF EXISTING CONDITIONS

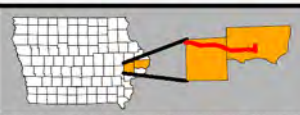
Overall, the existing US 30 two-lane highway in Cedar and Clinton Counties meets current and projected future travel needs. Aside from aging infrastructure and issues associated with the number of closely spaced at-grade railroad crossings, US 30 has no notable concerns from an engineering perspective. Likewise, there are no isolated or systemic safety or crash concerns. Travel in the corridor is at acceptable levels and is consistent and reliable; similar performance is expected under predicted 2045 traffic conditions. Figures 2-2a through 2-2g provide a graphical depiction of the existing corridor conditions.

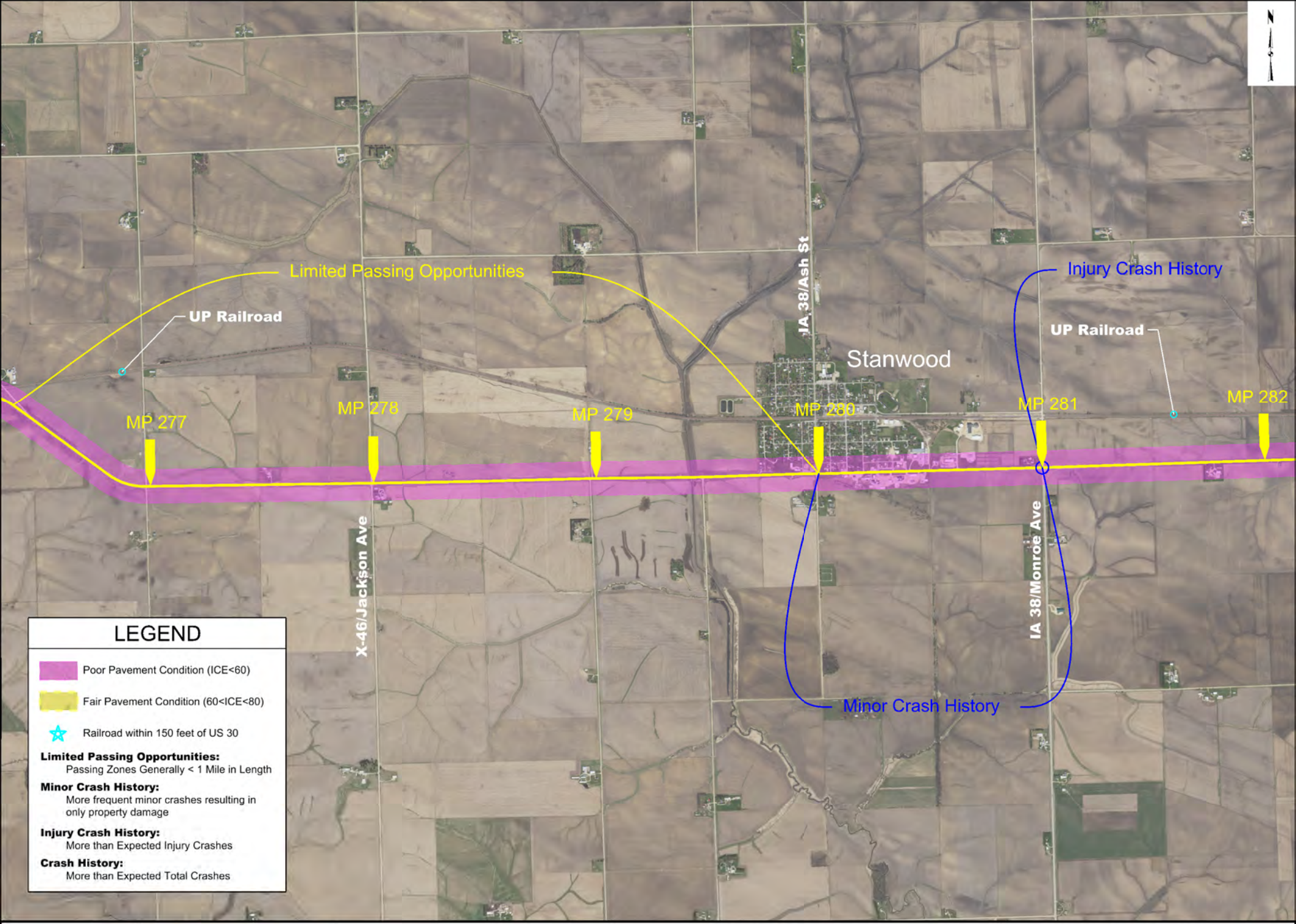
2.6 ENVIRONMENTAL CONSTRAINTS

A desktop review of known environmental, cultural, and community constraints was conducted as part of the Study. The desktop review focused on environmental areas such as floodplains, wetlands, woodland areas, recreational areas, waterways/protected rivers, sovereign lands, and regulated materials, while the cultural and community constraints identified known cemeteries, schools, and churches.

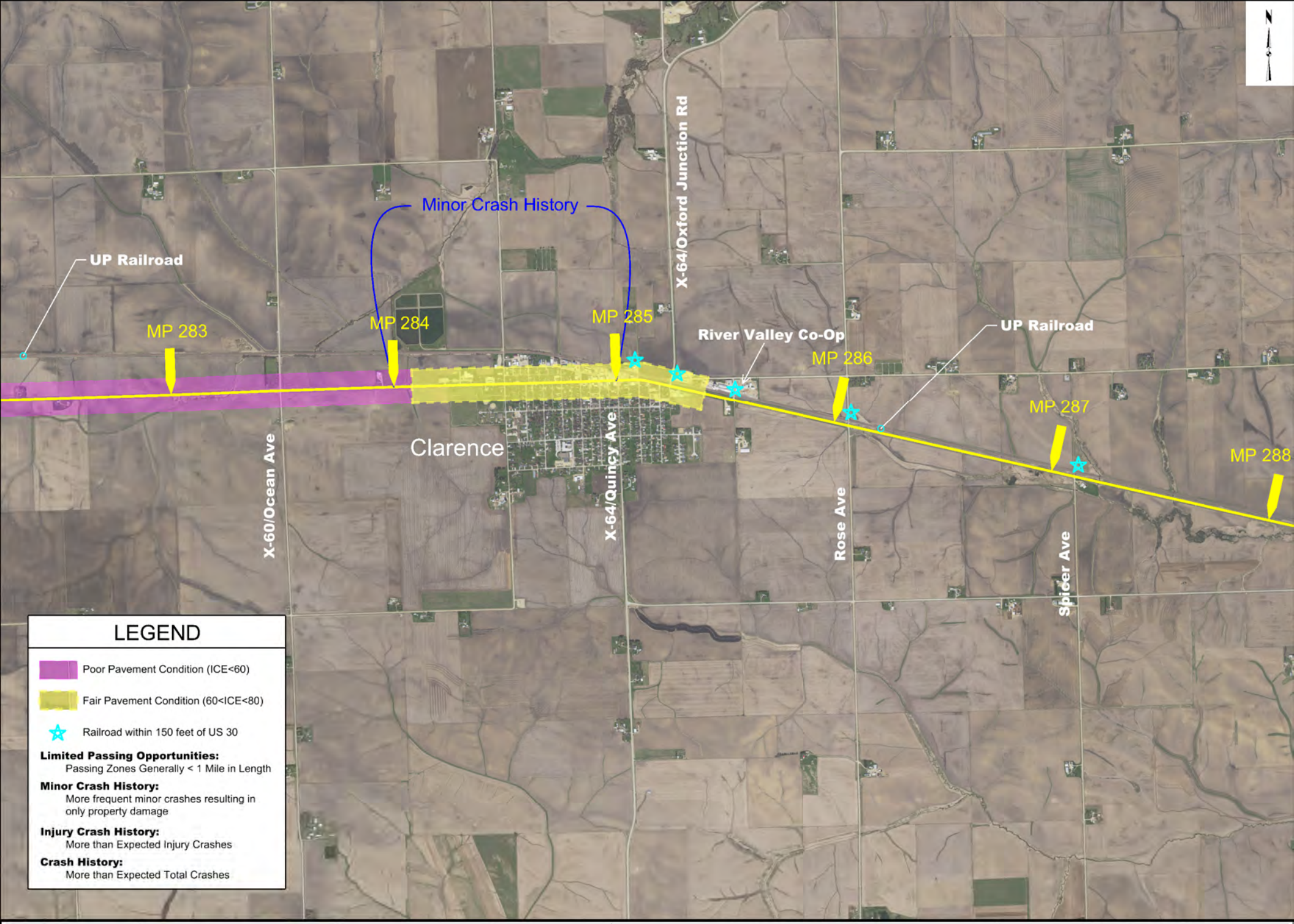
Results of the preliminary environmental desktop review are presented on the constraint and land use maps for the corridor in Appendix B. A more detailed review of constraints will be performed as part of future NEPA planning and engineering studies.



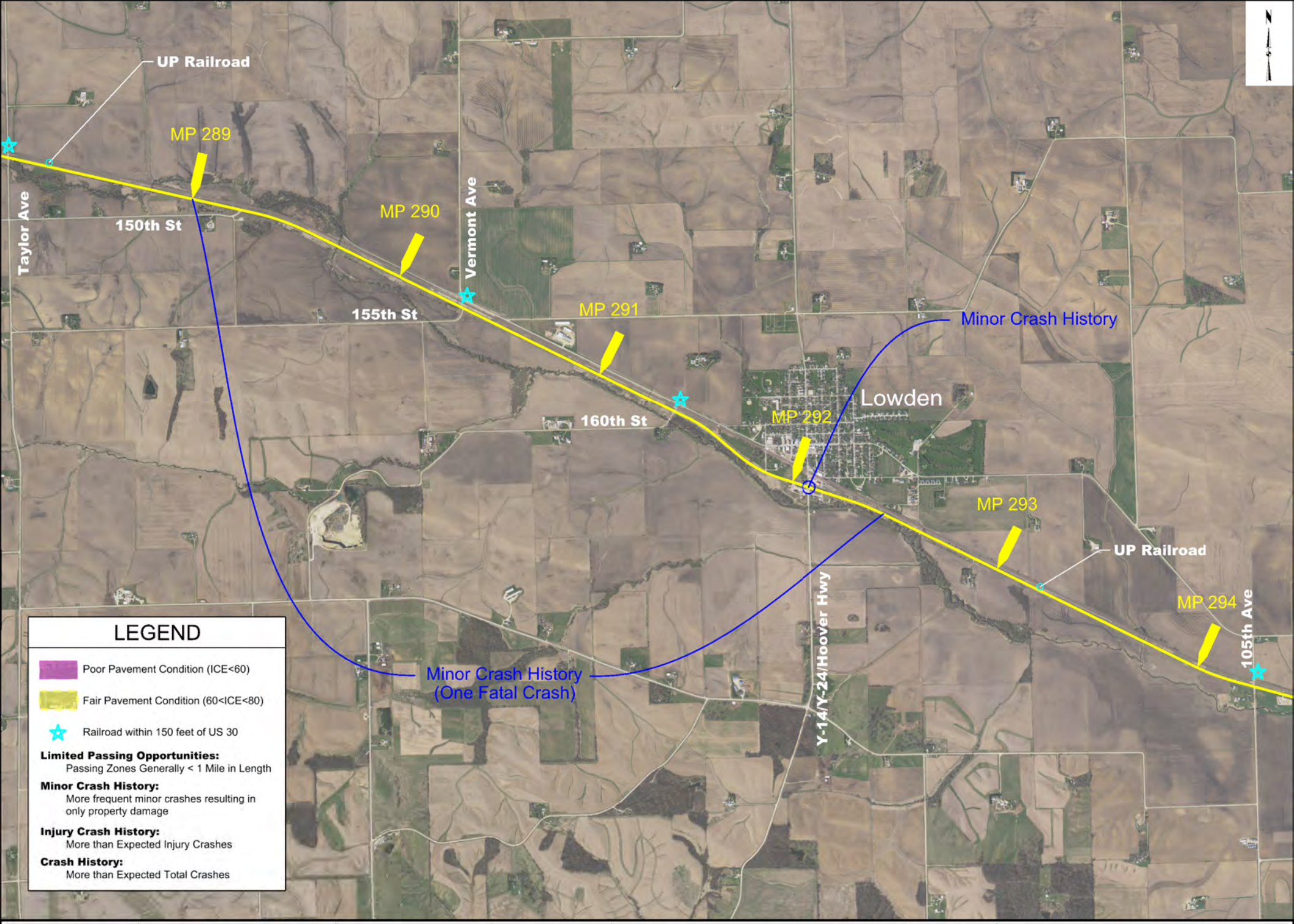
IOWADOT		Jacobs	DRAWING NOT TO SCALE	**Project Description** US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	**October 2019** **Figure 2 - 2a**

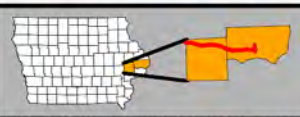


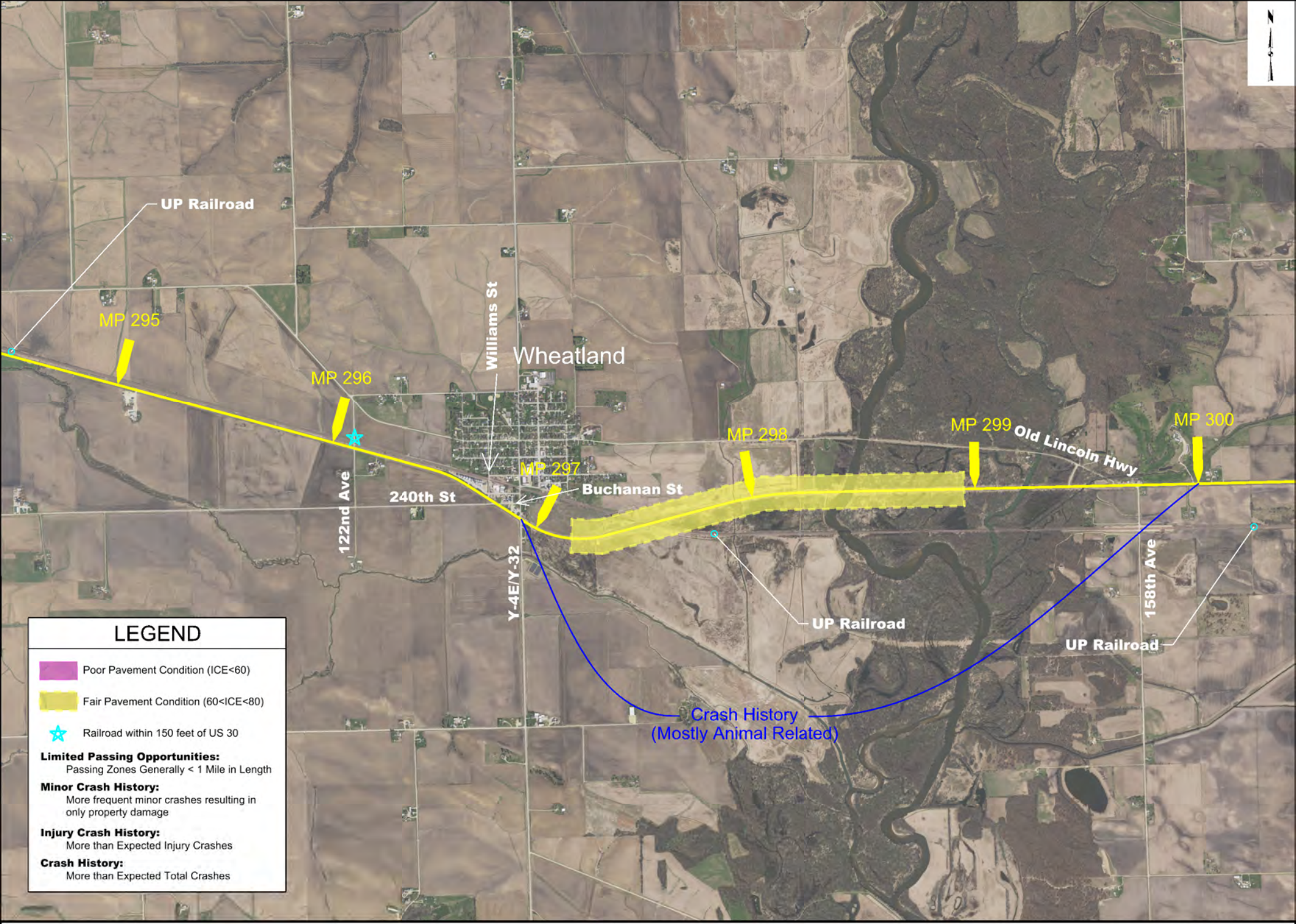
IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	October 2019 Figure 2 - 2b



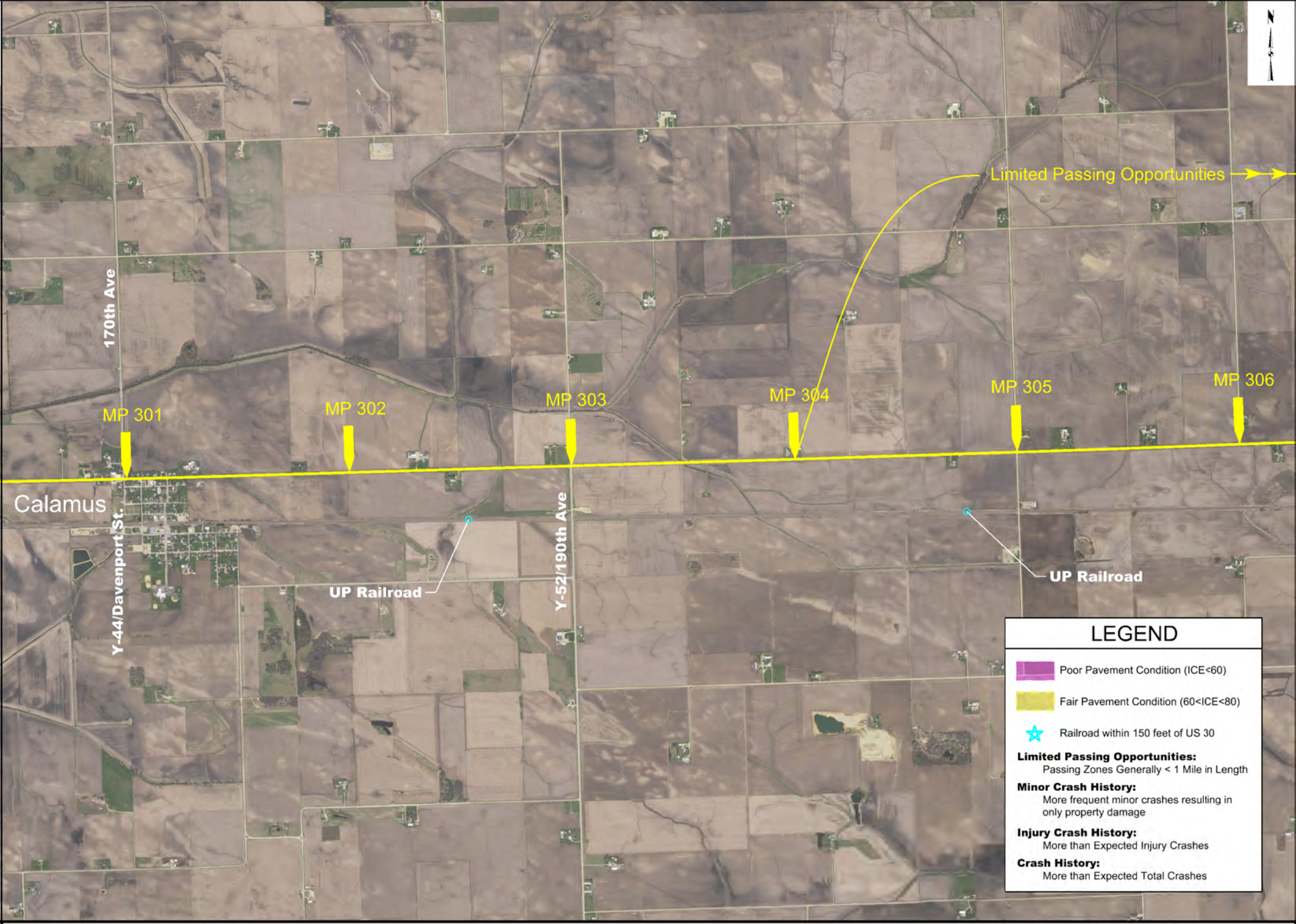
IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description: US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	October 2019 Figure 2 - 2c



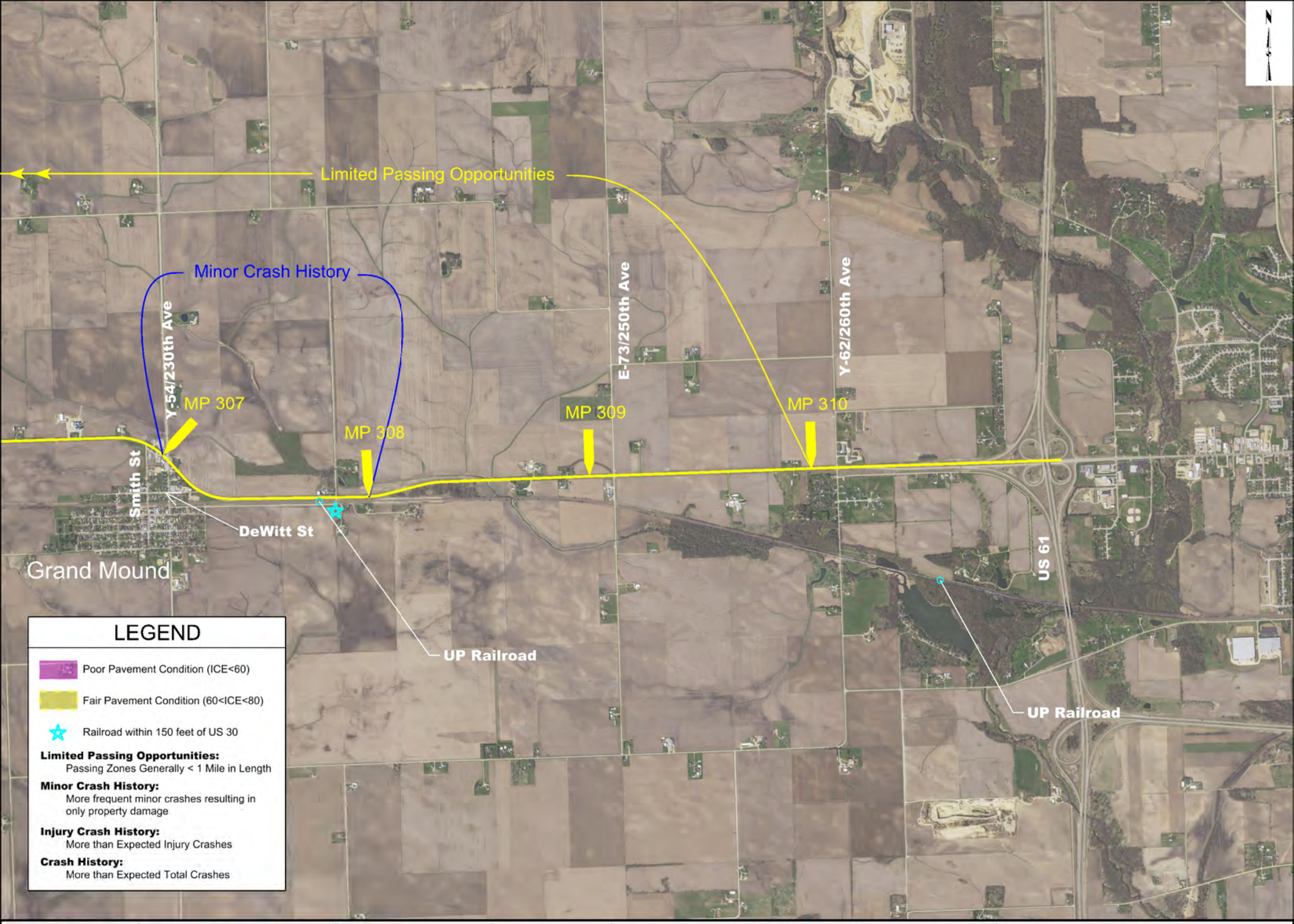
IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	October 2019 Figure 2 - 2d



IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	October 2019 Figure 2 - 2e



IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	October 2019 Figure 2 - 2f



IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description US Highway 30 PEL Study Corridor Existing Conditions Analysis Findings	October 2019 Figure 2 - 2g

3 ALTERNATIVES ANALYSIS

The US 30 PEL alternatives study focused on developing a range of possible improvement alternative corridors through the evaluation of two overall concepts: the roadway cross section (i.e., number of travel lanes) and on-alignment versus off-alignment (bypass) corridor improvements.

Observations and findings of the alternatives analysis suggest the following:

- Numerous alternatives exist for a US 30 corridor between Lisbon and DeWitt, including options that follow or use the existing highway and options that bypass certain communities or all communities along US 30 between Lisbon and DeWitt.

- Expanded highway alternatives that follow or use existing US 30 may still require some realignments of US 30 to maintain the flow of traffic during construction (at bridge locations for example) and/or avoid or minimize impacts to the UP Railroad, sensitive environmental areas, and right-of-way; constraints, right-of-way needs, and potential realignment locations vary throughout the Study corridor.

- Project costs and impacts will generally increase as travel lanes are added to the corridor.

- Off-alignment and bypass alternatives can be costly, with large footprints impacting farmland and undeveloped areas; these costs and impacts need to be balanced against possible in-town impacts and costs associated with on-alignment alternatives.

- Pavement widening through the existing communities, especially widening to a four-lane roadway, can have significant right-of-way impacts; bypass alignments at the communities may be more justified for further consideration under a four-lane US 30 scenario.

4 HIGHWAY EXPANSION AND ECONOMICS

Project stakeholders advocating for the expansion of US 30 in Cedar and Clinton Counties often cited the need for highway expansion to generate and promote economic growth.

A literature review of past research and case studies from around the United States suggests that there are many factors in addition to a transportation network that contribute to economic development, such as population, presence of an educated workforce, proximity to markets, interlinkages between counties and communities, economic development policies, and amenities. Generally, past research suggests that highway expansion, in and of itself, does not drive economic development; transportation networks are a supporting factor in economics but the rate, type, and success of economic growth in a region is influenced by many factors not directly related to the transportation system. Additionally, past research suggests that when economic development is realized following a highway expansion in a non-metropolitan area, it often comes at the expense of neighboring counties and/or communities; the realized development is often not “new” development but rather “displaced” development.

To evaluate the connection between economic development and highway expansion specific to Iowa, a transportation economic case study was performed for four highway corridors in Iowa

that have characteristics similar to US 30 and have undergone expansion from a two-lane to a four-lane highway. For comparison purposes, the Study corridor and a second rural two-lane highway corridor were also considered in the economic study.

The findings of the US 30 PEL economic case studies are consistent with the findings identified through the literature review: economic growth is complex and multi-faceted. Before and after comparisons of the studied economic trends varied from corridor to corridor. While variable, findings do suggest that economic performance and growth at the local corridor level are highly influenced by conditions and factors present at the state and national levels. None of the case study corridor comparisons identified any one potential economic indicator that consistently showed a significant change in growth trend between the before and after conditions that did not also occur at the state level. In instances where an economic metric appears to overperform following highway expansion (compared to trends at the state level), the corridor prior to expansion (before period) was also nearly matching, or out-performing, the growth trends at the state and/or national level.

A functioning and safe transportation system is a piece of the economic health and development equation at the local, state, and national levels. However, the are no strong suggestions that expanding a rural highway corridor from two lanes to four lanes can significantly drive economic development. The findings of these case study comparisons align with many of the findings by other researchers and studies within and outside of Iowa that suggest that investment in a transportation system where traffic volumes and needs do not warrant expansion does not necessarily yield a favorable return on investment in the form of local, regional, and state economic growth. In short, the transportation network can support ongoing economic development of an area, but it is unlikely to be a factor that drives new growth.

5 PUBLIC INVOLVEMENT PROCESS AND INPUT

As part of the US 30 PEL Study, a detailed public involvement plan was developed and used (Jacobs, 2019d). There were three main forums for public involvement and input gathering: small-group meetings (see Section 2.1), Public Information Meetings (PIMs), and online resources available on the Iowa DOT public involvement website.[2] Many of the online comments and public input were submitted during the various PIM comment periods.

All comments submitted to Iowa DOT at the PIMs or via the online tools have been saved and documented in the Public Involvement Management Application (PIMA) tool, a centralized comment/response management system implemented and managed by Iowa DOT. The goal of this system is to provide a secure and electronically accessible repository for comments. PIMA was also used to maintain a database of stakeholder contact information.

The following subsections summarizes the material presented and the general comments received at each of the three PIM events held for this Study.

[2] https://pima.iowadotpi.com/public/comment/

5.1 PIM #1

The initial PIM was hosted online via the Iowa DOT's Public Involvement website[3] beginning on April 3, 2019, with the comment period ending on April 25, 2019. The online PIM consisted of a prepared presentation, complete with audio, that shared information about the US 30 PEL process, study goals and objectives, and results from initial data gathering and existing conditions analysis. Appendix C contains a copy of the PowerPoint presentation. Stakeholders were encouraged to provide their input on the existing conditions in the Study corridor and share characteristics of the existing corridor that should be considered as part of this Study; the website provided opportunities for comments to be submitted online.

Approximately 59 comments were received. Many of the comments received focused on the number of US 30 travel lanes. Regarding the possibility of expanding US 30 to four lanes, 26 respondents (44 percent) were neutral or had no opinion, 23 respondents (39 percent) were in favor of expanding US 30 to four lanes; and 10 respondents (17 percent) commented that they were either in favor of a Super-2 highway or not in favor of expansion. Table 5-1 summarizes the various reasons stated in the public comments for supporting or not supporting US 30 expansion to four lanes.

Table 5-1. SUMMARY OF PUBLIC COMMENTS PROVIDED FOR PIM #1

Reasons shared for supporting four lanes:

- Concerns with the amount of US 30 truck traffic
- Presence of farm equipment throughout the year
- Safety
- Relief of I-80; viable alternative route to I-80
- Increase of traffic on US 30
- Improve the morning commute
- Increase accessibility (make it easier to travel east or west)
- Economic growth

Reasons shared for opposing four lanes:

- Loss of farmland
- Concern of impacts to existing businesses in the local communities
- Resources could be used elsewhere (e.g., I-80); expansion does not seem necessary
- Super-2 highway would suffice
- Poor use of tax dollars; money would be better spent maintaining existing roads and making improvements in areas that frequently flood
- Afraid that it would increase taxes

Summary of other comments received:

- Would like more information about the study
- Concern about personal property or businesses (would like to stay informed)
- Would be in favor of expansion or improvements but does not specify that it would need to be a four-lane
- Noise concerns for improvements/expansion
- Would like consideration of more bike and pedestrian options

[3] https://www.news.iowadot.gov/pim/

5.2 PIM #2

The second PIM was held at the North Cedar High School in Clarence, Iowa, on June 19, 2019, in an open-house format. The purpose of PIM #2 was to discuss the status of the Study and solicit stakeholder input on two main topic areas: (1) the potential to bypass some or all of the local communities along US 30 versus improving US 30 on its current alignment and (2) the number of travel lanes necessary to meet future needs. Appendix D contains copies of the materials presented at PIM #2. A total of 271 people attended and signed in at PIM #2. For those unable to attend in person, meeting materials were posted to the Iowa DOT Public Involvement website.[4] Public comments were gathered at the PIM and online.

Approximately 79 comments were received. Many of the comments received focused on the number of US 30 travel lanes. Regarding the possibility of expanding US 30 to four lanes, 25 respondents (32 percent) were neutral or had no opinion, 50 respondents (63 percent) were in favor of expanding US 30 to four lanes, and 4 respondents (5 percent) commented that they were not in favor of expansion or favored a two-lane highway option. Table 5-2 summarizes the input and comments received at PIM #2.

Table 5-2. SUMMARY OF PUBLIC COMMENTS PROVIDED FOR PIM #2

Reasons shared for support for four lanes:	Reasons shared for opposing four lanes:
• Existing two-lane highway is unsafe with the number of trucks. • Four lanes provide better and safer opportunities for farm/ag equipment to use the corridor. • Four lanes will provide a relief to and make I-80 safer; US 30 should be expanded instead of I-80. • Four lanes are the only acceptable option. • Four lanes are required for economic growth; employment growth for Clinton and DeWitt with employees living in “bedroom” communities, like Wheatland. • People will drive a greater distance between home and work with a four-lane highway. • US 30 crossing of the Wapsipinicon River is one of few river crossings in the area wide enough for large farm machinery. • Four lanes would make a faster and more reliable US 30; today people generally drive faster than the speed limit. • US 20 was four-laned; why not US 30? • Safety concerns with a Super-2 highway	• Large impact to and division of farmland. • Unnecessary expense; money could be better used elsewhere. • Traffic does not warrant expansion to four lanes. • Super-2 highway is a good compromise and would meet travel needs at a lower taxpayer cost.

[4] http://www.news.iowadot.gov/pim

Table 5-2. SUMMARY OF PUBLIC COMMENTS PROVIDED FOR PIM #2

Reasons shared for support of bypasses:

- Connect an improved US 30 to the southern US 61/US 30 interchange
- Moving US 30 away from the UP Railroad corridor would improve safety

Reasons shared for opposing bypasses:

- Impacts to, and potential diagonal severance of, farmland
- Access to the communities from bypasses (intersection and interchange needs and safety)
- Negative impacts to existing businesses—especially in Clarence
- A south bypass around Lowden could result in flooding

Summary of other comments received:

- Safety concerns with the UP Railroad being so close to US 30 (number of trains, speed of trains, traffic backing up onto US 30, overnight at-grade crossings blocked, and train derailments)
- Future projected traffic is too low; they do not capture traffic that would use a more reliable US 30
- Google Map directions take traffic to I-80 instead of US 30; travelers not following a map miss US 30
- The presence of farm equipment using US 30 is a big factor that traffic volumes do not reflect

5.3 PIM #3

The third and final PIM for the US 30 PEL Study was held at the North Cedar High School in Clarence, Iowa, on September 19, 2019, in an open-house format. The purpose of PIM #3 was to present the overall study findings and proposed recommendations and the planned next steps in the project planning and delivery process. Appendix E contains copies of the materials presented at PIM #3. A total of 184 people attended and signed in at PIM #3. For those unable to attend in person, meeting materials were posted to the Iowa DOT Public Involvement website.[5] Public comments were gathered at the PIM and online.

Approximately 29 comments were received. Many of the comments received focused on the number of US 30 travel lanes. Regarding the possibility of expanding US 30 to four lanes, 4 respondents (14 percent) were neutral or had no opinion, 11 respondents (38 percent) were in favor of expanding US 30 to four lanes, and 14 respondents (48 percent) commented that they were in favor of the Super-2 Highway alternative. Table 5-3 summarizes the PIM #3 comments received.

[5] http://www.news.iowadot.gov/pim

Table 5-3. SUMMARY OF PUBLIC COMMENTS PROVIDED FOR PIM #3

Comments related to a four-lane highway:

- Four-lane highway is needed for economic development, especially in rural areas.
- If it was justifiable to four-lane US 20, then the same should be true for US 30.
- A recommendation of less than a four-lane highway is not forward thinking and does not consider local perspectives; projected future traffic forecasts are too low and don't capture the volume that would divert from I-80.
- Certified site selectors/companies do not select sites in the area because there is no four-lane highway; manufacturers, companies, and the Iowa Economic Development board will refute the study results.
- Population increases and decreases along I-80 and US 30 are not being considered.

Comments related to a Super-2 highway:

- Passing lanes would not require taking large swaths of farmland while addressing safety and congestion concerns.
- Passing lanes, improved shoulders, and wider bridges over the UP Railroad and Wapsipinicon River would provide extra room for wide farm equipment.
- Super-2 highway is the right-size improvement; Super-2 "makes sense."
- Super-2 closely matches the existing and historic US 30 highway better than a four-lane road and aligns with planned historic and interpretive center near Wheatland.

Comments about bypass roadways:

- On-alignment improvements with less farm ground impact compared to bypasses supported by farmers.
- Small shift of US 30 at Mechanicsville would greatly improve traffic flow when trains are present; balance the separation against possible unfavorable right-of-way impacts.
- Keeping US 30 on current alignment is the correct solution and brings people into the communities; desire for travelers to slow down, stop and enjoy the local communities, and preserve historic aspect of US 30.

Summary of other comments received:

- Add/extend a westbound turn lane on existing US 30 at Mechanicsville to hold cars when there is a train; add/extend right-turn lanes at other locations to provide more storage for vehicle backups.
- Building a bridge over the railroad at Mechanicsville would solve the problem with the railroad.
- Continue four lanes from Lisbon to past the curve near the west side of Mechanicsville.

5.4 SUMMARY OF PIM COMMENTS

Public and stakeholder comments largely fall within two categories: those advocating for highway expansion to aid in future economic growth and development, and those advocating for avoiding large impacts to existing farmlands and/or negatively impacting the local communities and existing businesses within the corridor. The following were other common topics of input:

- General support for some level of corridor improvement
- Close spacing of the UP Railroad is a concern and can disrupt traffic, especially around Mechanicsville

- Farm and agricultural equipment is present in the corridor year-round and should be considered; there are limited crossings of the Wapsipinicon River available in the area capable of accommodating large equipment

6 CORRIDOR RECOMMENDATIONS

The following recommendations address the three overarching goals of the US 30 PEL Study. The basis for these recommendations is a combination of the findings and observations of the various topical studies performed as part of this PEL Study and input received from the public and project stakeholder groups.

6.1 GOAL 1—ROADWAY CROSS SECTION AND RANGE OF IMPROVEMENT ALTERNATIVES

6.1.1 RECOMMENDED ROADWAY CROSS SECTION

The recommended roadway section for US 30 from west of Mechanicsville to just west of DeWitt is a Super-2 highway (see Figure 6-1). It is recommended that US 30 remain a two-lane rural highway but with the addition of passing lanes spaced at regular intervals in both directions of travel; passing lanes would generally be spaced every 4 to 5 miles. Passing lanes would be limited to the rural areas of the corridor and would provide regular opportunities for faster-moving traffic to pass slower-moving vehicles safely without crossing into the opposing lane of traffic.

Widening US 30 to accommodate a three-lane section, two through lanes with a center two-way left-turn lane (TWLTL), is recommended for the urban areas where the added pavement width can be accommodated with minimal impact to private property and where turning traffic is present. Incorporating the TWLTL removes the turning traffic from the through lanes of travel, minimizing the delay experienced and maintaining smooth traffic flows through the communities.

Reasons for the recommendation of a Super-2 highway over the other alternative roadway sections (traditional two-lane and four-lane highways) are as follows:

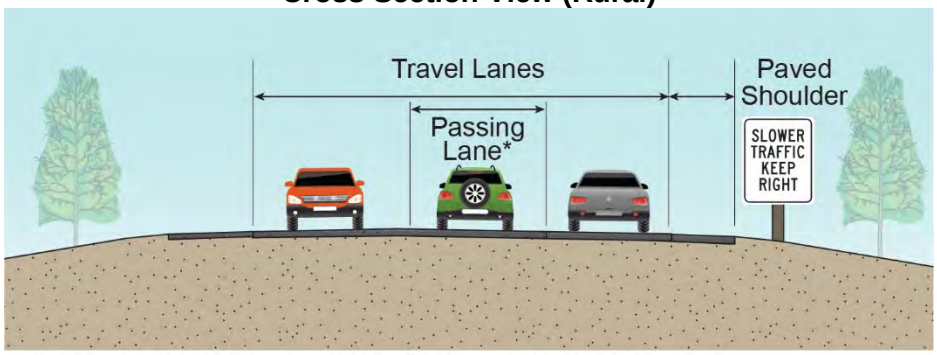
- US 30 is a critical link of the rural Iowa transportation network and there is public support for enhancement of the corridor; Iowa DOT has identified this corridor as a priority corridor for safety and mobility in its long-range planning studies.
- A Super-2 highway will continue to reliably meet expected future traffic needs in the region; similar to a two-lane highway, but with the added benefit of increased passing opportunities and reduced delay within the local communities, a Super-2 highway is expected to operate at LOS C or better under future year 2045 traffic projections with travel times and speeds nearly equal to those observed today.
- Reserve capacity is present within the existing corridor; future traffic would need to more than double or triple what is currently projected before travel performance on a two-lane or Super-2 highway would degrade to levels below current target thresholds.
- A Super-2 highway is a lower-cost and lesser-impact solution compared to expanding to a four-lane highway, resulting in better return on taxpayer investments:
  - Prior Iowa DOT study (Iowa DOT, 2018) suggests expanding an existing two-lane highway to a typical Super-2 highway costs about 15 to 20 percent of the cost of widening the existing highway to four lanes.
  - Findings of impact estimation performed as part of this US 30 PEL Study suggests additional right-of-way needs associated with US 30 expansion to a Super-2 highway are about one-quarter to one-third of the additional need that would be associated with expansion to a four-lane highway on the current US 30 alignment.

- Safety benefits have been observed in other highway corridors previously converted to a Super-2 highway (US 169 Fort Dodge to Humboldt and US 63 Oskaloosa to New Sharon have seen crash reductions of 67 and 49 percent, respectively, since conversion of a traditional two-lane rural highway to a Super-2 highway).
- The minimal benefits, if any, to travel time and safety performance within the corridor gained by expanding the existing two-lane highway do not outweigh the added costs of constructing, operating, and maintaining a four-lane highway.

Figure 6-1. SUPER-2 HIGHWAY CONCEPT

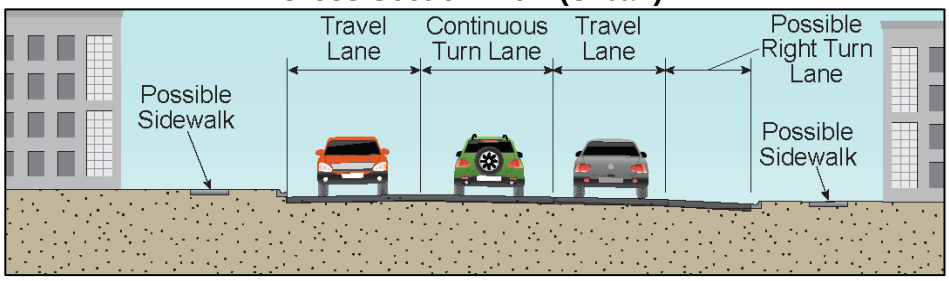
Plan View

Cross Section View (Rural)



* Passing lanes can be in either direction, are discontinuous, and spaced at established intervals along a corridor.

Cross Section View (Urban)



In addition to the passing lanes and TWLTLs within the local communities, other improvements recommended for consideration in combination with the Super-2 concept could include shoulder enhancements, turn lanes at rural intersections, rumble strips, and other low-cost and practical improvements that have proven operational and safety benefits.

6.1.2 RANGE OF IMPROVEMENT ALTERNATIVES

A range of Super-2 highway alternatives for various passing lane configurations and combinations in each direction of travel throughout the US 30 PEL Study corridor were developed and evaluated at the corridor-wide and individual highway segment level. The purpose of the Super-2 highway passing lane alternatives evaluation was to identify possible locations for future passing lanes that balance corridor-wide needs against the context of individual highway segments. The passing alternatives include use of the existing US 30 highway to the extent possible, except at locations where an alignment shift or off-alignment configuration may be needed or beneficial (see Section 6.2 for additional discussion of bypass roadways).

The evaluation of passing lane locations was generally limited to the rural sections of the US 30 PEL Study corridor. Through the communities, alternatives that maintain a three-lane roadway (two through lanes plus a TWLTL) or standalone dedicated turn lanes were developed.

Findings of the various alternative analyses were combined to develop a Recommended Future Study Area for consideration in future environmental and engineering studies of the corridor.

6.1.2.1 Rural Highway Segment Alternatives

Current Super-2 highway design guidance and practice (Iowa DOT Design Manual Chapter 6C-2) provides a uniform, or nearly uniform, spacing of 4 to 5 miles between subsequent passing lanes in a given direction of travel over the length of a Super-2 corridor. The uniform spacing builds a sense of expectation for a driver as to when future passing opportunities can be expected. Following this guidance results in a set of passing lanes, one in each direction of travel, between each of the communities within the Study corridor. Current design guidance also addresses optimal placement of passing lanes in light of features such as highway curvature; bridges or large drainage structures; side road intersections and private property access; and other potential constraints. A more detailed list of criteria used as part of this Study is summarized in Appendix F.

Passing lane location alternatives, specific to each rural highway segment in the Study corridor, were evaluated by comparing and balancing current design guidance with highway segment-specific features and possible impacts. The evaluation recommended the following for future study: a range of two to four passing lane location alternatives in each direction of travel within each rural highway segment. General observations of the range of passing lane location alternatives suggested for future consideration include the following:

- Various combinations of individual highway segment alternatives generally maintain the desired corridor-wide 4- to 5-mile spacing between passing lanes; however, depending on the passing lane locations constructed, it is possible that spacing between adjacent passing lanes could be slightly less than 4 miles or greater than 5 miles.

- The Lisbon Bypass and existing four-lane US 30 section just west of DeWitt essentially provide unrestricted passing opportunities. When addressing Super-2 passing lane locations and spacing of passing opportunities across the Study corridor, it may be possible and/or desirable to avoid constructing passing lanes along the two-lane highway sections west of Mechanicsville and east of Grand Mound.

- From an individual highway segment perspective, the section of US 30 between Wheatland and Calamus has numerous potential environmental constraints and may be the most challenging segment for developing and locating passing lanes.

- From a corridor-wide and sequential passing lane spacing perspective, various rural sections of US 30 could be critical depending on the direction of travel and the context of specific needs of adjacent rural highway sections.

Appendix F provides additional information on the range of passing lane location alternatives for each rural highway segment recommended for continued study.

6.1.2.2 Individual Roadway Segment Alternatives (Urban)

US 30 roadway segments through the communities within the Study corridor were evaluated for possible three-lane roadways (two through travel lanes and a center TWLTL) and standalone dedicated turn lane locations. The urban roadway segments are defined as those that pass through the corporate limits of the various US 30 communities. The evaluation sought to identify at least two or three possible three-lane roadway section alternatives within the communities for future study and consideration. The urban three-lane roadway alternatives for each of the communities are presented in Appendix G. General observations of the three-lane roadway alternatives include the following:

- An alignment shift at Mechanicsville may improve overall traffic flow and possible safety benefits by increasing the distance between the highway and the at-grade local roadway UP Railroad crossings. This shift will come at the expense of additional right-of-way need, including possible impacts to existing buildings. An off-alignment bypass around Mechanicsville may require even more right-of-way need, but the right-of-way need could be limited to undeveloped areas and avoid impacts to existing homes and businesses.

- Additional study of traffic characteristics specific to each local community, such as the number of vehicles making turning movements at local intersections or on-street parking demands, may be warranted in a future study to identify appropriate limits of the three-lane roadway section and/or turn lane needs.

- To accommodate a three-lane section, widening of US 30 to some degree in all of the local communities is likely. This widening may require some right-of-way need. These needs will vary across communities and even between areas within a community.

6.1.2.3 Recommended Future Study Areas

For future environmental and engineering studies, this Study recommends an area that generally centers on the existing US 30 highway, both in rural areas and through the local communities. While it is recommended to generally follow existing US 30, there are locations where a new alignment or shifted alignment could provide added benefits. Potential areas of a shifted or new alignment for an improved US 30 corridor include the following:

- Around the City of Mechanicsville where an off-alignment alternative could have some value in managing and coordinating traffic needs and demands while the UP Railroad tracks are in use

- Locations where a slight alignment shift may be necessary to maintain US 30 traffic during construction, such as at bridge locations (see Appendix H for additional details on minimum roadway shifts and maintenance of traffic needs during construction)

- Locations where added separation between US 30 and the UP Railroad is needed to introduce westbound passing lanes without impacting the railroad corridor

The Recommended Future Study Area, developed based on the overall findings of this US 30 PEL Study, is depicted on Figures 6-2a through 6-2g. The recommended limits shown are intended for a launching point into future environmental and engineering study and may need to be adjusted as future study progresses. Characteristics of this area include the following:

- Follows the existing highway corridor

- Widens in areas where possible passing lanes could be constructed and/or alignment shifts may be necessary

- Could accommodate possible three-lane roadway expansion through the communities

- Could accommodate other improvements to existing sections of US 30 (shoulder upgrades, turn lanes)

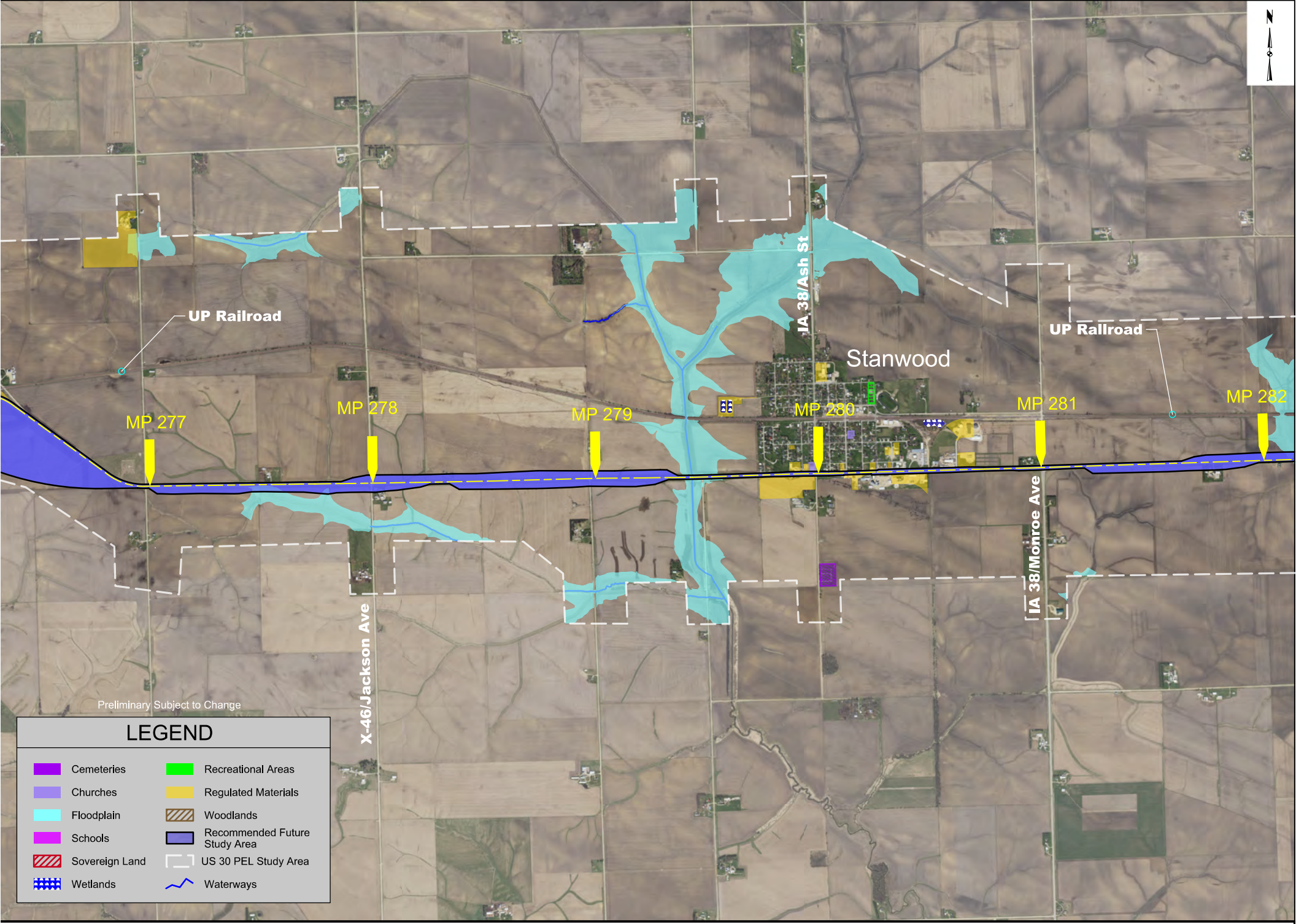
IOWADOT | Jacobs | DRAWING NOT TO SCALE

Project Description

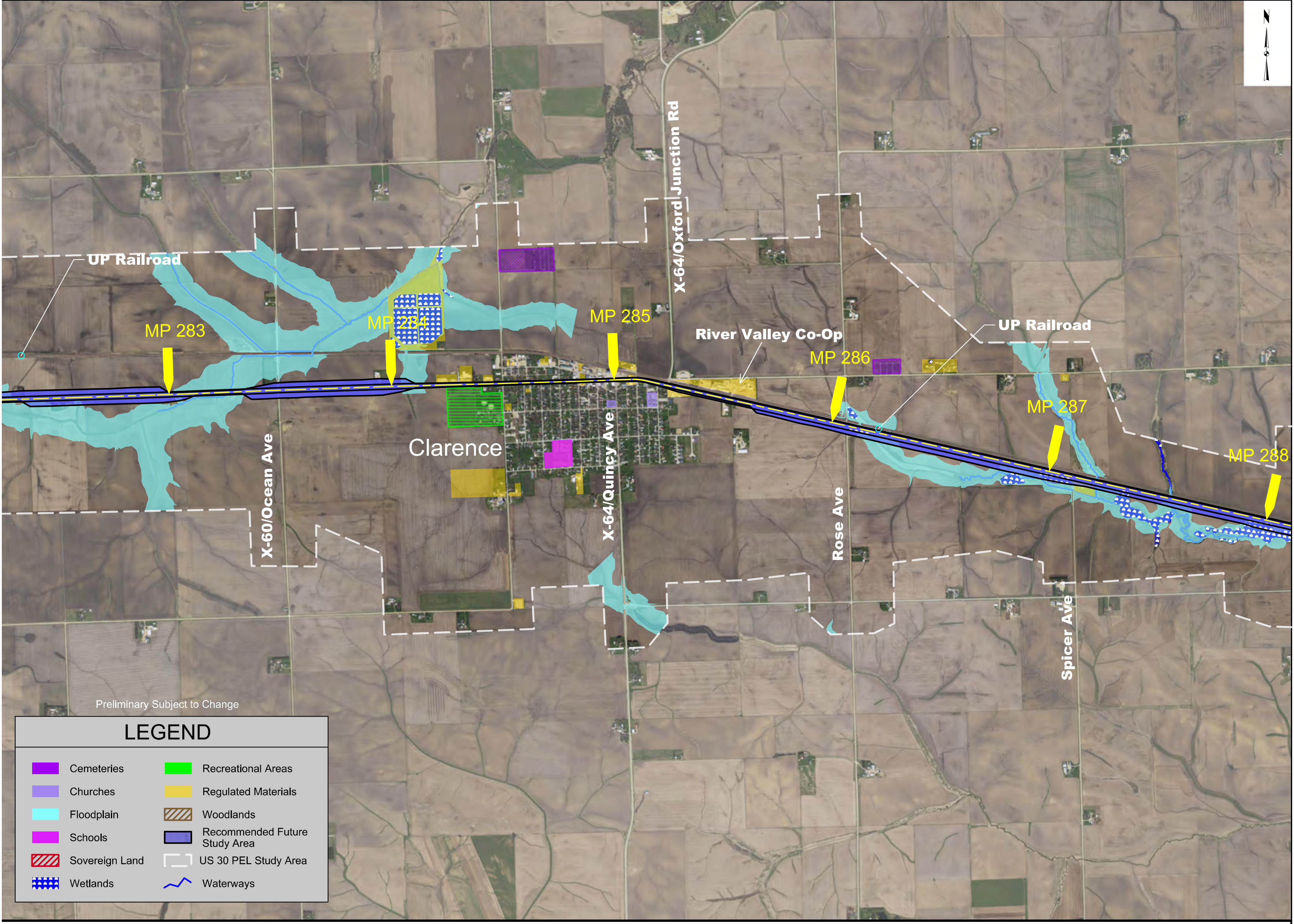
US Highway 30 PEL Study Corridor
Recommended Future Study Area

March 2020

Figure 2 - 2a



IOWADOT		Jacobs	DRAWING NOT TO SCALE	**Project Description** US Highway 30 PEL Study Corridor Recommended Future Study Area	**March 2020** **Figure 2 - 2b**



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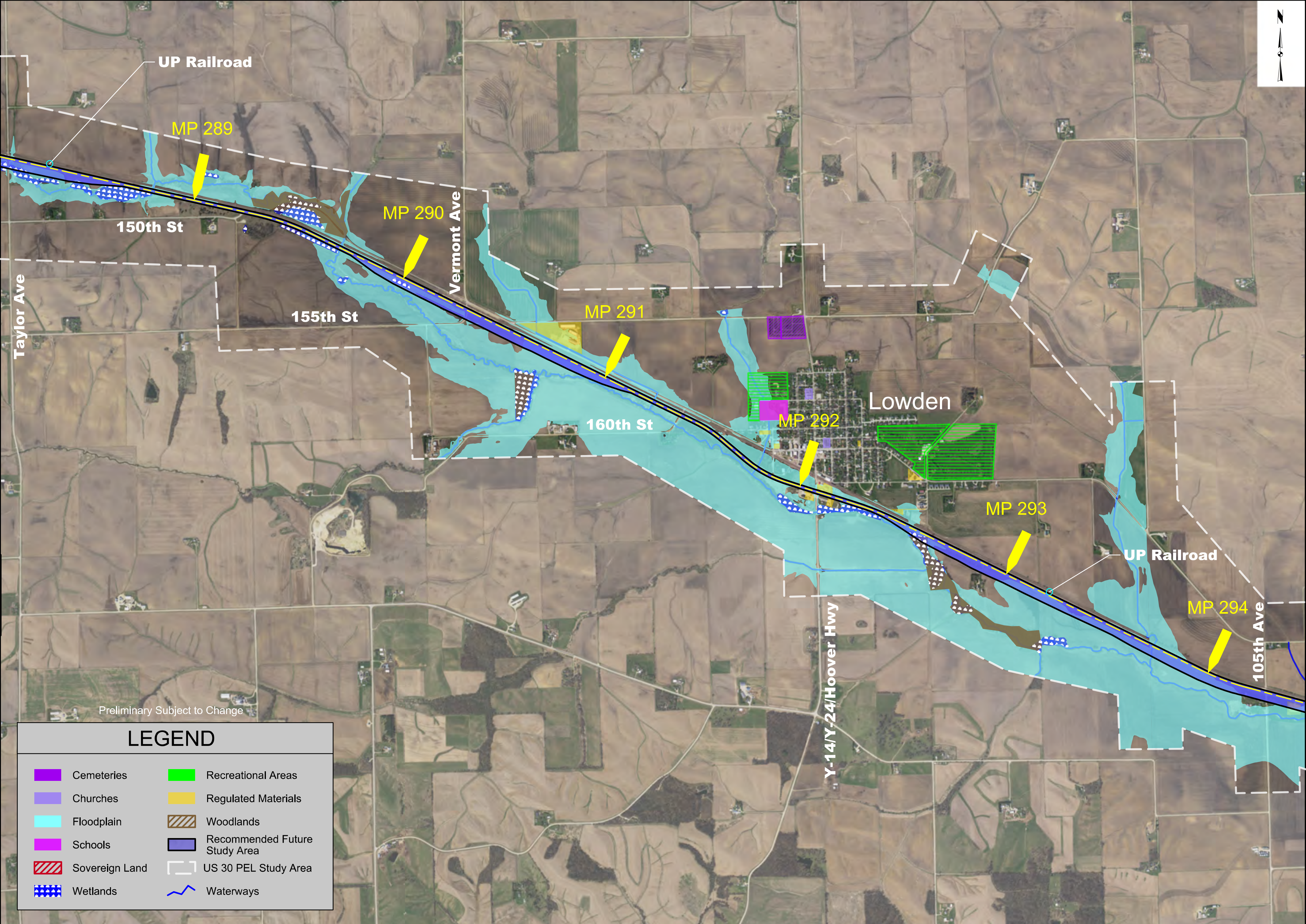
				US Highway 30 PEL Study Corridor Recommended Future Study Area	Figure 2 - 2c



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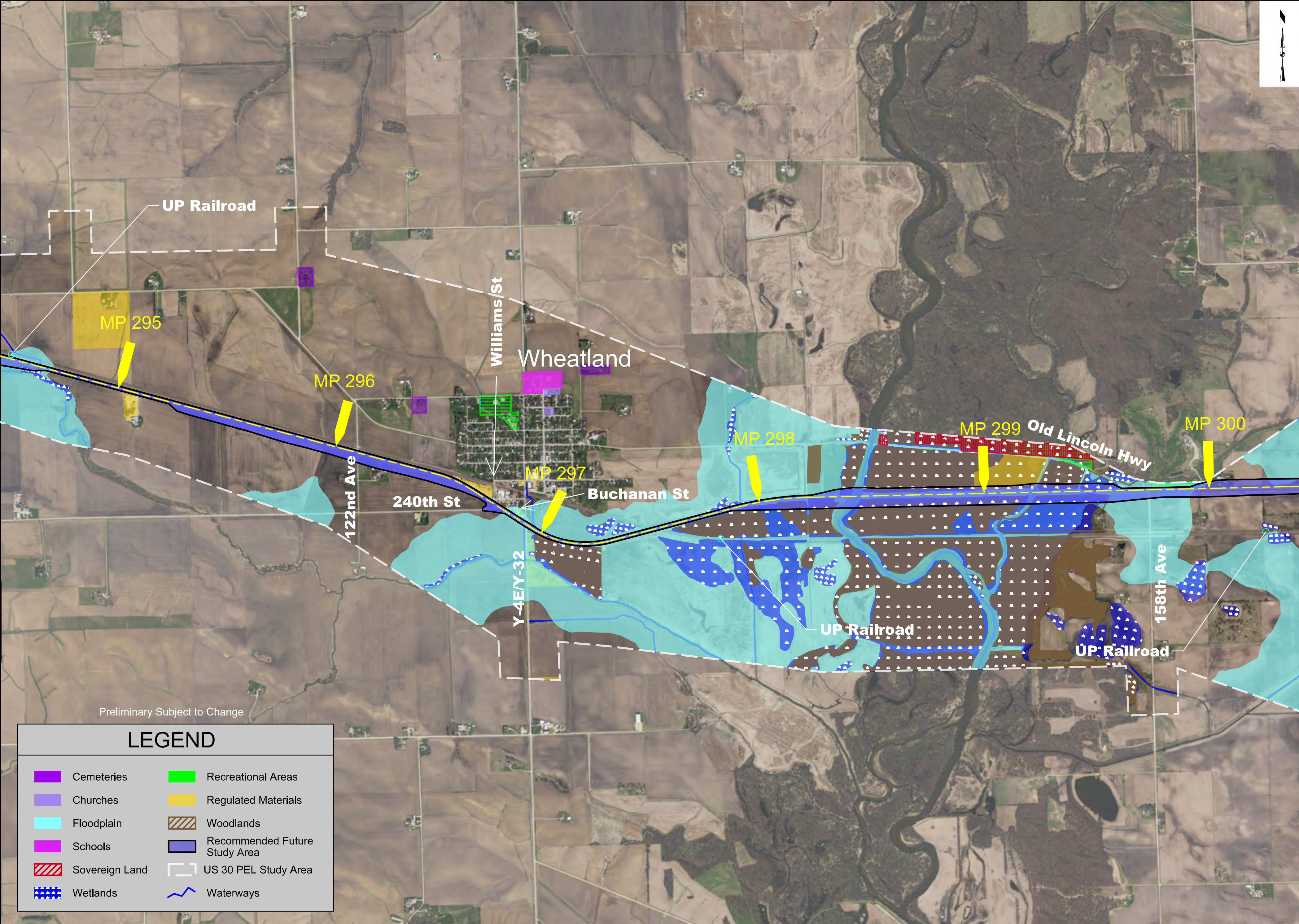
				US Highway 30 PEL Study Corridor Recommended Future Study Area	**Figure 2 - 2d**



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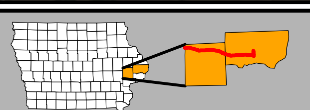

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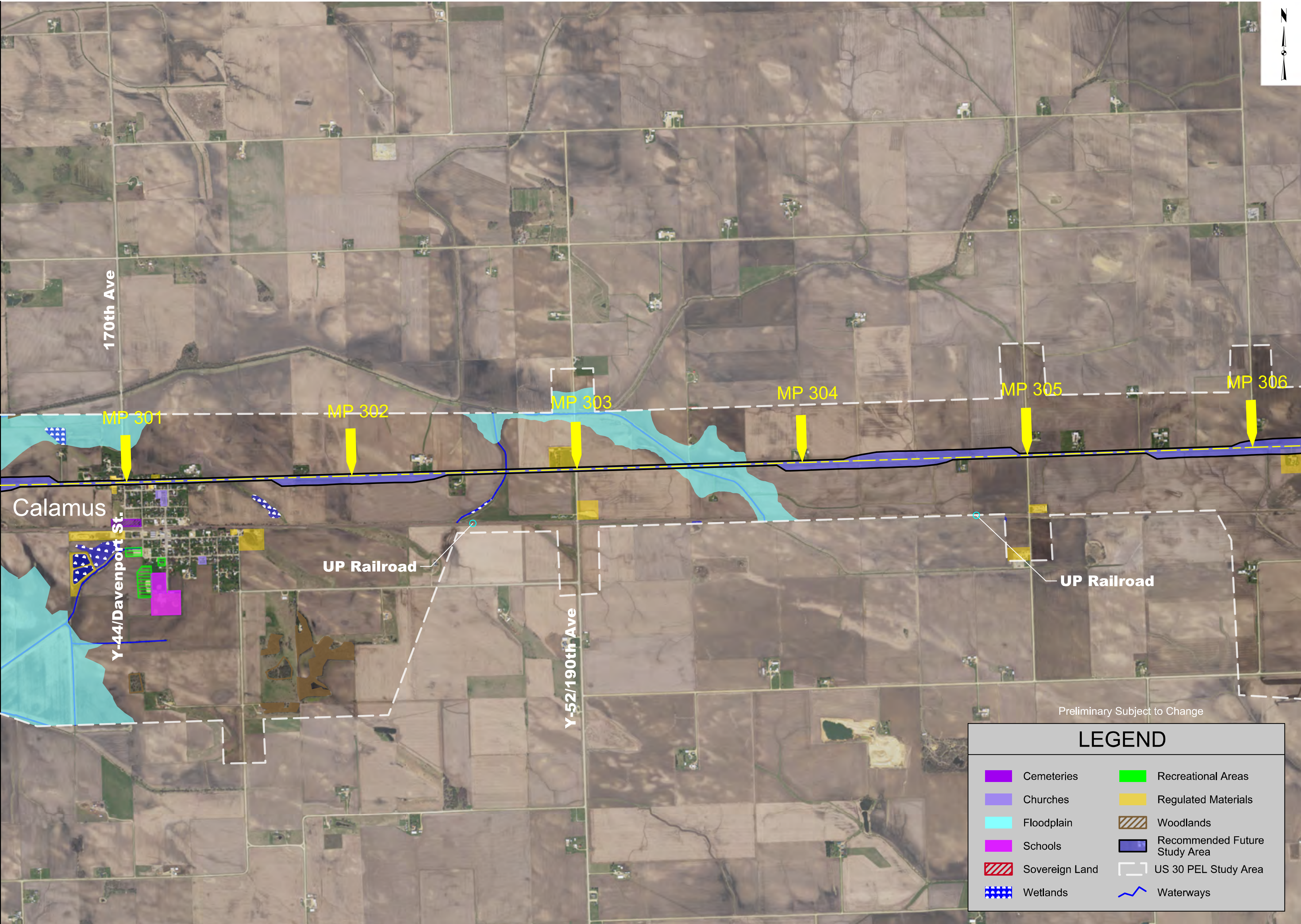
Project Description

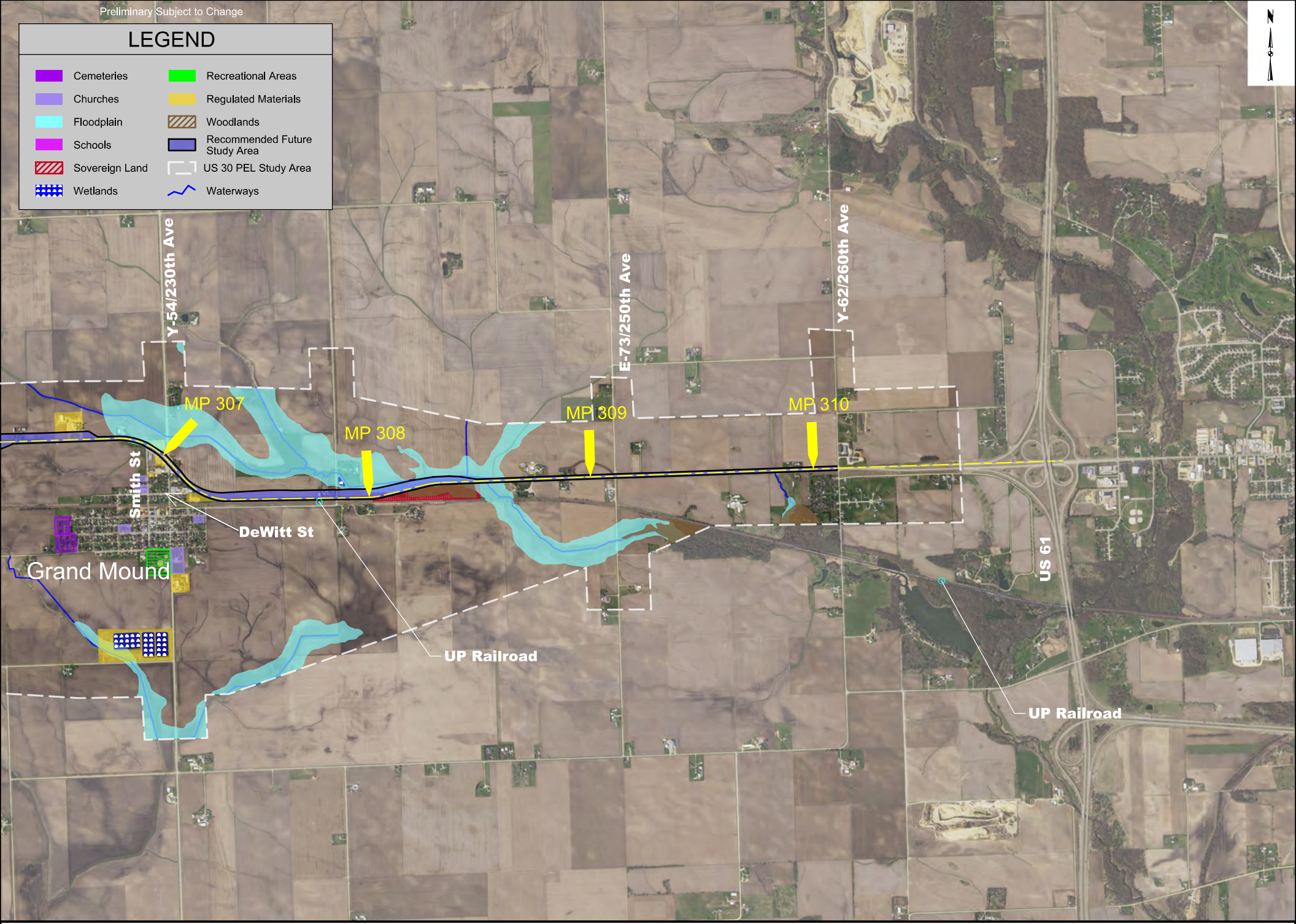
US Highway 30 PEL Study Corridor
Recommended Future Study Area

March 2020

Figure 2 - 2e



IOWADOT		Jacobs	DRAWING NOT TO SCALE	Project Description	March 2020
				US Highway 30 PEL Study Corridor Recommended Future Study Area	**Figure 2 - 2f**



IOWADOT		Jacobs	DRAWING NOT TO SCALE	**Project Description** US Highway 30 PEL Study Corridor Recommended Future Study Area	**March 2020** **Figure 2 - 2g**

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6.2 GOAL 2—ON-ALIGNMENT IMPROVEMENTS AND BYPASS ROADWAYS

The findings of the US 30 PEL Study do not recommend bypass roadway alternatives and generally recommend an improved corridor that closely follows the existing highway. The reasons for this recommendation are as follows:

- The primary purpose for considering off-alignment and bypass roadways is the level of impact expected with widening US 30 to a four-lane highway through the local communities. With the Super-2 highway concept, any impacts associated with widening can be minimized or avoided altogether.
- Bypass roadways are expensive and impactful; public feedback supports the minimization of impacts to Iowa farmland.
- The creation of discontinuities within existing local roadway networks and/or the need for major local roadway reconstruction to accommodate a bypass roadway are avoided.
- The potential for changes in travel patterns across the UP Railroad tracks is avoided.
- Negative effects of potential redistribution of local travel patterns in the communities (more traffic traveling through residential areas, near schools, etc.), and secondary impacts to existing businesses along US 30 (loss of revenue by highway dependent businesses due to removal of passerby traffic) are avoided.
- Bypass roadways are not expected to provide a significant savings in travel time between Lisbon and DeWitt.

6.3 GOAL 3—CORRIDOR PRIORITIZATION

This Study did not identify existing highway sections or spot locations within the Study corridor that necessitate immediate attention related to roadway design features, traffic operations, or overall safety performance; the existing corridor is performing efficiently and safely. Considering the cost associated with constructing the recommended Super-2 highway and accompanying improvements for a 40-mile corridor, it is unlikely that a single improvement project is feasible. Rather, to accommodate funding availability and prioritization with other needs across Iowa, a phased approach to improving US 30 in Cedar and Clinton Counties that combines regularly planned rehabilitation and maintenance projects with Super-2 corridor improvement strategies is recommended. With the phased implementation of infrastructure condition and performance, locations where oncoming traffic and other factors limit safe passing opportunities and public input should be considered. The period over which improvements are implemented will likely be dictated by individual segment needs and available construction funding; no specific schedule of improvements is recommended as part of this Study.

6.3.1 INFRASTRUCTURE CONDITION AND PERFORMANCE

Existing infrastructure condition varies throughout the Study corridor. Most notable are the conditions of the pavement between Lisbon and Clarence, and the bridges that cross Yankee Run Creek west of Lowden and the UP Railroad, Wapsipinicon River, and tributary waterways between Wheatland and Calamus. These highway assets are aging, and their condition could

indicate a need for improvement in the near future. From an existing system stewardship perspective, these areas would be the higher priorities in the Study corridor. Two bridge replacement projects are in Iowa DOT's current improvement program—the bridge over the UP Railroad (scheduled for construction in 2024) and the bridge over the Wapsipinicon River (scheduled for construction in 2023). Further study is needed to determine the extent of pavement repair needed between Lisbon and Clarence and repair needs of the other bridge structures currently not in Iowa DOT's improvement program.

6.3.2 FUTURE TRAFFIC AND TRAVEL PERFORMANCE

Projected future traffic volumes are greatest on the western and eastern sections of the Study corridor compared to the interior sections of the corridor. Similarly, the locations with the greater traffic volumes are also those that have some limited passing opportunities today. These areas would be the sections most likely to experience delay compared to the central sections of the corridor where greater opportunities to pass slower-moving vehicles are present, and overall traffic volume is less.

Corridor travel speeds and public input concerning the reliability of travel should also be reviewed. Travel through the communities of Stanwood and Clarence is slowed the most due to reduced speed limits and the increased density of access points and local traffic movements in the communities; the section of the Study corridor with the lowest average travel speeds today is the section of the corridor from Stanwood to Clarence.

6.3.3 PUBLIC INPUT

A common concern throughout the various public involvement activities was the presence of the UP Railroad and the close spacing of the railroad tracks to US 30 in some locations of the Study corridor, particularly at Mechanicsville where travel disruptions and crashes have been reported while trains are passing through the area.

Public input has also stressed the importance of maintaining a suitable crossing of the UP Railroad and the Wapsipinicon River for large farm and agricultural equipment; the river, with limited local roadway crossings, adds importance to US 30 between Wheatland and Calamus. In addition to the river crossing, public feedback suggests that agricultural businesses currently along US 30 rely heavily on the corridor and the access it provides.

6.3.4 PRIORITIZATION SUMMARY

Table 6-1 summarizes the criteria used to prioritize the various segments of the Study corridor to assist with future project planning and programming, as construction funds become available.

Table 6-1. Rural and Urban Roadway Segment Prioritization Criteria

	Prioritization Criteria	Range of Criteria Rating	
		Low	High
Rural Segments			
Infrastructure Asset Condition	Existing Bridge Condition	Assets in good condition with significant service life remaining	Asset in poor condition with minimal service life remaining
	Existing Pavement Condition	Assets in good condition with significant service life remaining	Asset in poor condition with minimal service life remaining
Traffic Operational Characteristics	Future Daily Traffic Volumes	Lowest predicted daily traffic in the Study corridor	Highest predicted daily traffic in the Study corridor
	Average Travel Speed	Highest average travel speeds in the Study corridor	Lowest average travel speeds in the Study corridor
	Marked Passing Opportunities	Passing opportunities along the existing two-lane highway are frequent	Passing opportunities along the existing two-lane highway are minimal
Urban Segments			
Traffic Operational Characteristics	Predicted Future US 30 Through Traffic	Lowest predicted daily traffic traveling through a community	Highest predicted daily traffic traveling through a community
	Access Points (local sideroads, driveways, alleyways, etc.)	Small number of access points/intersections per mile	Large number of access points/intersections per mile
Public Input	Railroad Interference with US 30 Travel	Railroad is located away from US 30 and trains have no impact to US 30 travel	Railroad is located adjacent to US 30 and trains result in traffic backing up onto US 30

Applying the criteria listed in Table 6-1 to the rural Study corridor segments results in the recommended prioritization. The recommended prioritization includes the existing infrastructure

condition and traffic operational characteristics, with all criteria considered equally. This prioritization is depicted in Table 6-2. As shown, the segments of the corridor west of Clarence are of highest priority, all of which have poor asset condition, greater projected traffic volumes compared to other sections of the Study corridor, some reduced travel speeds under current conditions, and areas with limited marked passing opportunities. The next tier of priority would include the Clarence to Lowden and Wheatland to Calamus sections where existing bridge conditions could be a concern, and the section east of Calamus where traffic volumes start to increase as the highway approaches the DeWitt end of the corridor. Pockets of reduced speed and no-passing zones are also present between Calamus and Grand Mound. The lowest priority tier includes the areas between Lowden and Wheatland where infrastructure conditions are good, traffic volumes are low, and passing opportunities are available. This lowest tier also includes the area east of Grand Mound where infrastructure is in good condition and the existing highway widens to a four-lane section near DeWitt.

Table 6-2. Rural Highway Segment Overall Prioritization Summary

		Prioritization Influential Factors[a]			
Priority	Rural Segment	Infrastructure Condition	Future Daily Traffic	Average Travel Speed	Marked Passing Opportunities
1	West of Mechanicsville	●	●	◒	◒
2	Mechanicsville to Stanwood	●	●	○	●
2	Stanwood to Clarence	●	●	●	○
4	Calamus to Grand Mound	○	◒	●	◒
5	Wheatland to Calamus[b]	●	○	○	○
6	Clarence to Lowden	◒	○	◒	○
6	East of Grand Mound	○	◒	○	◒
8	Lowden to Wheatland	○	○	○	○

● Most Need

◒ Some Varying Degree of Need

○ Least or No Need

[a] The symbols presented in this table are intended to provide a relative visual comparison of need between highway segments only; the resultant prioritization is not necessarily based on the cumulative addition of symbols across the groups of influential factors.

[b] Priority based solely on condition of multiple bridge structures within this highway segment. Two bridges are currently identified for repair in 2023 and 2024. This segment would become a lower priority segment if proposed Super-2 improvements would not affect these bridge locations.

Because asset condition is not a prerequisite for expanding a given rural roadway segment to a Super-2 condition, a second prioritization was performed that did not include asset condition. Results of this prioritization are based on the anticipated traffic operational features and are summarized in Table 6-3. Similar results are shown in Table 6-3 with the areas west of Clarence near the top. Removing the infrastructure condition moves the Calamus to Grand Mound section up in priority because of the average travel speed under current conditions and the existing marked no-passing zones. Similarly, the section east of Grand Mound may show a higher level of importance. The Wheatland to Calamus section moves down in priority because bridge condition is not being factored in and traffic volume in this section of the corridor is low compared to the sections west of Clarence and east of Calamus.

The findings in Table 6-3 suggest that the highway segment between Calamus and Grand Mound and the section east of Grand Mound could be moved up the priority list if additional construction funding were available.

Table 6-3. Rural Highway Segment Traffic Operational Prioritization Summary

		Prioritization Influential Factors[a]		
Priority	Rural Segment	Future Daily Traffic	Average Travel Speed	Marked Passing Opportunities
1	West of Mechanicsville	●	◒	◒
2	Calamus to Grand Mound	◒	●	◒
3	Mechanicsville to Stanwood	●	○	●
3	Stanwood to Clarence	●	●	○
5	East of Grand Mound	◒	○	◒
6	Clarence to Lowden	○	◒	○
7	Wheatland to Calamus	○	○	○
8	Lowden to Wheatland	○	○	○

● Most Need

◒ Some Varying Degree of Need

○ Least or No Need

[a] The symbols presented in this table are intended to provide a relative visual comparison of need between highway segments only; the resultant prioritization is not necessarily based on the cumulative addition of symbols across the groups of influential factors.

Table 6-4 provides a prioritization summary of the US 30 segments within the various local communities. The prioritization of converting US 30 to a three-lane roadway and/or adding standalone turn lanes or other improvements was based on the following: 1) condition of the existing roadway pavement, 2) future projected traffic volumes, 3) the number of side road and

property access points (i.e., the potential for the presence of traffic turning out of or into the US 30 flow of traffic), 4) and the proximity of the UP Railroad and its potential to disrupt traffic flow on US 30 when a train is present.

The communities of Clarence, Mechanicsville, and Stanwood are shown as higher priority and are the recommended communities for roadway widening. Calamus and Grand Mound are the middle tier while Lowden and Wheatland have the least priority. The middle and low tier communities should still be considered for spot standalone turn lanes or other intersection improvements, even though such improvements may not offer the same benefits that a full roadway widening project would.

Table 6-4. Urban Highway Segment Prioritization Summary

		Prioritization Influential Factors[a]			
Priority	Rural Segment	Roadway Condition	Future US 30 Traffic	Points of Access	Railroad Influence
1	Clarence	●	◒	●	◒
1	Mechanicsville	●	●	○	●
3	Stanwood	●	●	◒	○
4	Calamus	○	◒	●	○
4	Grand Mound	○	●	◒	○
6	Wheatland	○	○	○	○
7	Lowden	○	○	○	○

● Most Need

◒ Some Varying Degree of Need

○ Least or No Need

[a] The symbols presented in this table are intended to provide a relative visual comparison of need between highway segments only; the resultant prioritization is not necessarily based on the cumulative addition of symbols across the groups of influential factors.

The overall recommendation for corridor prioritization is shown on Figure 6-3. This prioritization is recommended to focus future study and assist with project financial programming. The order of this prioritization can be adjusted to match available construction funds or address changes in the highway sections that may happen over time, such as changes in traffic volume or degradation of an existing asset.

- Infrastructure Condition (Pavement)
- Railroad Concerns
- Higher Traffic Volumes
- Pockets of Reduced Speed and Limited Passing Opportunities

- Lowest Traffic Volumes
- Passing Opportunities Available
- Infrastructure Condition (Bridge)

- Lowest Traffic Volumes
- Passing Opportunities Available

- Higher Traffic Volumes
- Pockets of Reduced Speed and Limited Passing Opportunities
- Infrastructure Condition (Multiple Bridges)

- Higher Traffic Volumes
- Pockets of Limited Passing Opportunities available
- Short distance to US 30 four-lane section

MECHANICSVILLE

STANWOOD

CLARENCE

LOWDEN

WHEATLAND

CALAMUS

GRAND MOUND

UP RR

WAPSIPINICON RIVER

30

LEGEND

Higher

Medium

Lower

IOWADOT

Jacobs

LOCATION MAP SCALE
0 0.5 1
Miles

Description

US Highway 30 PEL Study Corridor
Possible Corridor Prioritization

October 2019

Figure 6 - 3

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6.4 NEXT STEPS

Findings, observations, and alternatives developed as part of this PEL Study will serve as the foundation for future planning and engineering studies. The US 30 PEL Study team considered several Super-2 highway configurations with the purpose of identifying the following: 1) whether passing lanes could be accommodated between each of the local communities, 2) what constraints or alignment shifts may need to be considered, 3) where placement of passing lanes may be most favorable within each highway section, 4) and what alternatives are possible to aid traffic flow through the communities and major intersections. These considerations are the basis for the Recommended Future Study Area (see Figure 6-2) presented in this Study. Future studies are recommended to include the following:

- **Recommended Future Study Area focus.** The US 30 PEL Study area was narrowed throughout the Study duration as findings and recommendations were reached resulting in the Recommended Future Study Area. This Recommended Future Study Area is intended to provide a defined area of focus for future environmental and engineering study. It may be necessary to adjust these recommended future study limits as alternatives are further developed and more detailed field studies are performed.

- **Balanced highway segment context and corridor-wide study approach.** Because of constraints (bridges, railroad, sensitive environmental areas, etc.), some rural highway sections may have limited options for possible passing lane placement. To successfully implement a Super-2 highway corridor-wide, identifying the optimal combination of passing lane locations between the various rural highway segments is important. The next phase of study should continue to focus on the full US 30 PEL Study corridor by identifying the "fatal flaws and constraints" within each highway segment and identifying the optimal combination of passing lane locations for the full Super-2 highway corridor. This corridor-wide identification of passing lanes provides some assurance that surprises will not surface during phased implementation or projects later in the implementation phase will not negatively affect Super-2 improvements constructed in earlier phases. Once the optimal passing lane locations are identified and a corridor-wide plan is in place, smaller groups of highway segments or individual locations can begin to be designed and studied independently.

- **Continued proactive public involvement and outreach**. Proactive outreach will keep stakeholders engaged and informed, and will continue the sharing of valuable insight and perspectives to identify the optimal Super-2 highway layout for the corridor. In addition, coordination with environmental resource agencies, as needed, and UP Railroad is recommended. Coordination with UP Railroad should include identification of UP's long-range plans for expansion of current tracks and improvements that could affect crossing locations. Any cross-synergies and cost-share opportunities between agencies should be identified in future planning studies.

- **Phased implementation to balance transportation needs with available construction funds**. To match available construction funding with the transportation needs across the State, a phased Super-2 highway implementation for the US 30 corridor between Lisbon and DeWitt may be necessary. Early improvements should take advantage of planned resurfacing, restoration, or rehabilitation (3R) projects in the corridor as an opportunity to

add passing lanes and other Super-2 highway improvements. The area of most need identified as part of this Study is the section of the corridor from Clarence west (poor pavement conditions, higher volume of traffic, and limited passing opportunities compared to other sections of the corridor). This is the first area of recommended focus for improvement. However, planned 3R projects are not a prerequisite for implementing Super-2 highway improvements. Additional sections of the corridor could be programmed for improvement as construction funding becomes available. The prioritization shown in this Vision Document is flexible; individual sections can be realigned within the prioritization framework to best match available construction funds.

- **Railroad Opportunities and Coordination.** Today, an average of 60 trains per day pass through the Study corridor, and that number could continue to grow into the future. Because of the number of at-grade railroad crossings closely spaced to existing US 30, the UP Railroad should remain a key stakeholder when considering US 30 traffic operations and roadway improvements during future study. Future study should examine the following: (1) the anticipated future number of trains passing through the corridor daily; (2) UP Railroad expansion or other improvement plans; (3) closely spaced at-grade crossing improvements that may be required as part of any US 30 highway improvement; and (4) exploration of improvements that could provide mutual benefit, particularly at heavily traveled at-grade railroad crossings like those at Mechanicsville, which could result in additional cost-sharing opportunities and funding sources (Federal Railroad Administration, FHWA, various safety funds and programs, grants, etc.).

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APPENDIX A
SUMMARY OF US 30 PEL SMALL GROUP MEETINGS

APPENDIX A—SUMMARY OF US 30 PEL SMALL GROUP MEETINGS

The Jacobs project team and Iowa DOT met with local project stakeholders through a series of small-group meetings to solicit input on the current functionality and future needs of the US 30 corridor. These meetings were scheduled with key individuals representing each jurisdiction (i.e., mayors, city administrators, county engineers, transportation department heads, etc.). These key individuals were encouraged to invite others representing their agency, including, but not limited to, law enforcement/first responders, public works, school districts, city council/board of supervisors, chambers of commerce, or any other key local stakeholder group or individual that could share their transportation thoughts from the stakeholder jurisdiction/organization perspective. The purpose of the small-group meetings was to gather initial input from key stakeholder representatives on the US 30 Preliminary and Environmental Linkages (PEL) Study and to discuss planned public outreach efforts.

Jacobs led and facilitated the open-forum meetings. Iowa DOT staff were present at all meetings, assisted in meeting facilitation, and shared information and ideas from the State's perspective. Jacobs and Iowa DOT introduced the PEL study process being used for the US 30 Study to each of the stakeholder groups, and shared the overarching goals and deliverables of the Study. The importance of stakeholder feedback was emphasized to each of the stakeholder groups, and the various opportunities for them to share input and ideas throughout the study was presented.

The following sections summarize the key takeaways from each of the stakeholder small group meetings.

CITY OF GRAND MOUND—AUGUST 13, 2018—GRAND MOUND CITY HALL

Participants representing the City of Grand Mound's perspective suggested that US 30 meets the needs of the community today; however, expanding US 30 to a four-lane facility would help attract new businesses and residential development.

From a safety perspective, the participants noted that there are frequent near misses and some crashes at the DeWitt Street and E Street intersections with US 30; these intersections are skewed and come off of the US 30 roadway curves.

Participants overall were not opposed to consideration of bypass alternatives around town, although some voiced a concern of keeping US 30 on alignment to support the businesses that are present along the corridor today. Participants noted that bypass alternatives should be considered in light of the following:

- Existing industry in Grand Mound is primarily north of US 30; a bypass to the south would pull this traffic through residential parts of the community and require crossing of the Union Pacific Railroad tracks.
- City sewage lagoons are located south of town and would be a constraint.
- Connecting US 30 to the south US 30/US 61 interchange at DeWitt would make sense.

The City currently does not have a formal land use or development plan for future growth. A community development group has recently formed locally and is currently performing a

survey of the Grand Mound residents to understand the workforce demographics and places of employment, including distance traveled to and from work. Current development in Grand Mound includes the expansion and relocation of a local trucking firm from an in-town location to a site on the west edge of town; this trucking company has 30 semitruck operators, and the new site will include a truck wash.

US 30 COALITION OF IOWA—AUGUST 14—EAGLE POINT LODGE, CLINTON, IOWA

The US 30 Coalition of Iowa has more than 200 members on its official mailing list and over 550 Facebook followers. The Coalition is passionate about expanding US 30 to four lanes across the State of Iowa, following in the footsteps of US 20. The Coalition's justification for expanding US 30 to a four-lane facility is to improve inter- and intra-state travel, spurring economic development throughout the US 30 corridor. The US 30 Coalition sees US 20 as a model corridor, and its perception is that communities along US 20 are now flourishing because of the highway expansion. The Coalition feels that a similar expansion of US 30 can turn around the slowly declining population and industry trends, particularly in the Clinton area.

The Coalition expressed its views of US 30 around five key points:

- Existing and future truck demands in the corridor and how this demand limits capacity, mobility, and safety performance; future trucking demands increase with the presence of intermodal facilities in Clinton and those planned near Cedar Rapids.
- This 40-mile section of US 30 has unreliable travel speeds and times displacing traffic that would normally use US 30 to other more reliable routes, such as I-80, even if travel distances and overall travel time is greater; they feel there is a sizable percentage of US 30 traffic that does not show up on US 30 because of this reliability concern.
- Expansion of US 30 would provide an alternate and more attractive route for travel between the eastern and central Iowa areas and the greater Chicagoland area; improvements to US 30 in Iowa would result in only a short 12-mile section of two-lane highway in Illinois before connecting to I-88 and would draw Chicago-bound traffic from I-80 and routes currently connecting Waterloo and Chicago.
- The lack of a four-lane east-west facility eliminates Clinton and the surrounding rural areas along the corridor from consideration for potential new industry—site selection criteria used by industries typically specify a need for close access to a four-lane roadway.
- Expanding US 30 to four lanes would better serve the efficient and timely movement of commodities from rural Iowa to greater markets, intermodal facilities, and interstate routes; all Iowa counties produce large amounts of wealth through commodity production and transportation, with timely delivery critical to the economy of rural Iowa.

CLINTON COUNTY—AUGUST 16, 2018—CLINTON COUNTY SATELLITE OFFICE, DEWITT, IOWA

Clinton County expressed the need for US 30 to be a four-lane divided freeway section for the County and the City of Clinton to be competitive in drawing in new business and industry. The County noted that the Clinton Regional Development Organization has cited that site selectors have consistently eliminated Clinton from consideration in favor of the Quad Cities area because of the presence of a four-lane roadway. They stressed the need for the US 30

corridor to be able to accept and handle a growing volume of truck traffic, particularly with the new intermodal facility planned in Cedar Rapids and those currently present in Clinton, and the existing trucking industry and quarries in the area. Concerns around truck traffic included additional delay to travelers along US 30, safety concerns due to the potential for more truck-related crashes, and decreased opportunities to pass slower moving trucks.

Clinton County noted that it has jurisdiction over Old Highway 30, which is generally very narrow and in need of repair; the Old Highway 30 crossings over the Wapsipinicon River are load-restricted. The County would like to close the bridges, but they serve a salvage yard and several residences. In general, the old highway, whose jurisdiction was transferred to the County, is a burden on the County financially and creates problems with the various dead ends and discontinuous roadways. A new US 30 corridor that would use the Old Highway 30 corridor would be a benefit to the County in multiple ways.

Safety issues were noted at several intersections, including those along the roadway curves in Grand Mound and the Clinton County Road Y4E intersection near Wheatland. The County also noted a concern with the safety performance of wider intersections created by a four-lane rural freeway with a median, citing US 61 as an example. The safety concern centered around a driver's ability to pick a safe gap in traffic and avoidance of making wrong-way movements, particularly for elderly drivers. With a four-lane divided freeway, intersection design details need to be carefully considered and treatments such as J-turns should be in the toolbox of strategies.

Overall, Clinton County appeared neutral on the topic of bypasses around the local communities but did note that a bypass could address a number of safety concerns at the intersections in Wheatland and Grand Mound. They also suggested that a logical connection would be to move US 30 to the south and connect it to the existing US 30/US 61 southern interchange at DeWitt. Doing so would make US 30 more continuous and avoid the need to overlap travel along US 61. The County noted that there are more capacity and crash issues with the US 61 southbound to US 30 eastbound "pig tail" loop at the south interchange than there are at the US 30/US 61 cloverleaf interchange.

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Participants representing the City of DeWitt emphasized the importance of a safe and reliable transportation connection between I-380 and I-88; it is this connection that most benefits the City and residents of DeWitt. They feel that US 30, not I-80, is the connection that should be the focus of Iowa DOT and the route that would best meet their needs. Participants noted that today, because of the unreliable and unsafe nature of US 30, commuters opt to take US 61 to I-80 in lieu of US 30.

Participants noted that Clinton County is struggling with decreases in population and business. Participants stated that their opinion is that prospective employers and businesses do not select Clinton or the surrounding area for the following reasons:

- No reliable four-lane facility nearby; a business wants to know the travel time between points A and B and that this travel time is consistent and reliable.
- Limited workforce; commuters are more likely to drive farther to work if a four-lane roadway is present.

- Safety concerns with truck traffic along existing US 30.
- A modern, not nostalgic, roadway network is needed.

Participants noted several reasons that they felt the existing US 30 corridor is unreliable, including the following:

- Volume of trucks, school buses, and agricultural equipment on the roadway.
- Traffic backups when the Union Pacific railroad crossings are in use.
- Additional delay and safety concerns with new signalized intersections near Marion in Linn County.

Participants feel that expanding and improving US 30 should be a higher priority of the Iowa DOT than expanding I-80. US 30 would serve a volume of traffic that travels I-80 daily because of I-80's reliability even though using I-80 requires a greater distance of travel and more travel time. By expanding US 30, the traffic opting to take the longer I-80 route would come back to the US 30 corridor, reducing travel time and distance, and lessening congestion and demand on I-80.

With the current transportation system, the benefit is given to the Quad Cities area from an economic and employment perspective. Residents of Clinton County feel that it is their turn to benefit from and get the focus of Iowa DOT and to have access to an improved roadway corridor connecting I-380 and US 61.

EAST CENTRAL IOWA COUNCIL OF GOVERNMENTS (ECICOG)—AUGUST 16, 2018—ECICOG OFFICE, CEDAR RAPIDS, IOWA

ECICOG provides various services to Cedar County in the way of transportation and economic planning. Historically, ECICOG transportation services in Cedar County have been primarily trail planning-related and not as participatory with larger highway- and transportation-related projects. They do not provide any economic development planning for Cedar County either—those services are provided by the East Central Intergovernmental Association (RPA 8). ECICOG tends to work closely with Cedar County but does not have much involvement with the individual communities along the corridor.

With the limited transportation-planning services provided, ECICOG did not have a lot of input on the US 30 corridor. They did indicate, that in their opinion, expansion of US 30 to four lanes would benefit Clinton and Cedar Rapids and would not provide much benefit to the smaller communities along the corridor.

ECICOG did provide some possible industry stakeholder contacts and offered to help advertise the US 30 project and public involvement events in their newsletter.

CEDAR COUNTY COMMUNITIES (MECHANICSVILLE, STANWOOD, AND CLARENCE)—AUGUST 16, 2018—CLARENCE PUBLIC LIBRARY

The primary feedback from the communities of Mechanicsville, Stanwood, and Clarence was that it would be beneficial to bypass the communities with an improved corridor for US 30. The stakeholders felt this way due to the increasing number of trucks traveling along the corridor and safety concerns through town. The only opposition voiced to a bypass was from the

City of Clarence main street group, representing the current business along the corridor. Their preference is to keep traffic coming through Clarence to support their existing businesses. They also noted that the current on-street parking along US 30 is important, and removal of the parking would hurt the businesses. Stanwood representatives noted that there are existing businesses in Stanwood along US 30 but felt that those business would still thrive with a bypass, assuming the bypass was not too far from town. They also acknowledged that if a bypass is the best solution, and some existing businesses are hurt, the benefits of redevelopment and added development opportunities would outweigh the negative risks.

All stakeholders agreed that the Union Pacific Railroad corridor causes problems; when the tracks are in use, queues and traffic disruptions ripple onto US 30, resulting in travel delay and an increase in minor traffic crashes. Because of the railroad presence, all communities felt a bypass to the south would be most beneficial. They see a southerly bypass as an opportunity, as long as the bypass is not too far from town, to grow and develop between the existing City limits and the bypass roadway. A cemetery south of Stanwood would be a constraint that needs to be avoided with a southerly bypass.

Concerns with a bypass included added emergency service response times, rerouting of school buses, and possible safety issues with intersections along a four-lane divided freeway. The participants suggested roadway overpass structures and grade-separated intersections to improve safety.

The participants noted that their communities are bedroom communities and agriculture-oriented, with the vast majority of their residents commuting out for work. They see an improved US 30 corridor as being an attractive draw for residential growth in the future. Removing the heavy through traffic from town, improving the railroad crossing situation, and having a modern reliable roadway nearby would improve the quality of life and promote the residential growth in the communities. With the low unemployment rates, residential development expanding the workforce pool would benefit not only the corridor but also employers in the Cedar Rapids, Clinton, DeWitt, Iowa City, and the Quad Cities areas.

Participants suggested that expanding US 30 to four lanes would be an economic benefit to the area, encouraging development of small, medium, and large industry. The improved roadway facility may also spur the Union Pacific Railroad to consider additional sidings.

EAST CENTRAL INTERGOVERNMENTAL ASSOCIATION (ECIA)—AUGUST 17, 2018—ECIA OFFICES, DUBUQUE, IOWA

The ECIA prepared an eight-county freight study in support of its long-range plan. The eight-county study included Clinton but not Cedar County. The freight study concluded that freight movement via rail is maxed out in the area, while barge transport and trucking remain viable and growing opportunities. The study noted that the volume of freight moved by truck in the region is greater than the national average. The freight study remained neutral on what improvements are warranted for the US 30 corridor but did recommend that improvements occur.

Through development of the freight study, ECIA received lots of input from carriers and shippers in the Clinton area. They also learned that some carriers route their trucks down US 61 to I-80

to I-380 rather than taking US 30 through Clinton and Cedar Counties. The carriers take the longer and more costly routes because of the safety and reliability of I-80; carriers perceive the four-lane roadway safer with more consistent travel times compared to US 30.

From a capacity standpoint, ECIA indicated that the existing two-lane corridor serves the need and doubling the volume of traffic still results in acceptable operations and mobility per their models. ECIA understands the local pressure and desire of expanding to four lanes but notes the data alone does not show a need.

CEDAR COUNTY—AUGUST 17, 2018—CEDAR COUNTY COURTHOUSE, TIPTON, IOWA

Cedar County feels that the corridor has a lot to gain economically by expanding US 30 to a four-lane facility. Cedar County is a rural county surrounded by more developed urban areas such as Cedar Rapids, Clinton, Iowa City, and the Quad Cities. Expanding US 30 would bring more residential development to the corridor and make commuting to these urban areas more efficient. Cedar County noted that residential growth from Linn County is starting to bleed into Cedar County.

Participants indicated that overall, US 30 meets the current travel needs but noted that the corridor does become congested during peak hours with commuters, trucks, and school buses. The increase in truck traffic is a particular concern; with the County starting to see grain trucks and operations pop up all over the County where they were not previously expected. For a US 30 four-lane in Iowa to provide all the benefits desired, a four-lane connecting to I-88 in Illinois is also important.

Participants also stressed the importance of US 30 being able to serve as a relief route to I-80 and I-380. When construction or crashes occur, the US 30 corridor receives significant volumes of traffic from I-80 and I-380. They provided a recent example of where a crash impacted I-80; during that incident, traffic was bumper to bumper along IA 38 and IA 1 trying to reach US 30. Improvements to US 30 from IA 38 to the west is seen as the area of most need for improvement.

Local roads in Cedar County are spaced approximately every mile along US 30, and the County will need to closely coordinate with any local roadway relocations included with the US 30 projects. The County also noted flooding history near Lowden and along Yankee Run Creek in Clinton County; an existing watershed parallels US 30.

The County's perspective on bypasses is that they should be considered on a city-by-city basis, and the acceptability of a bypass would likely vary, depending on a given city's needs. The County did express safety concerns with a new four-lane facility with at-grade intersections; if a new four-lane roadway is constructed, it should be access controlled with interchanges.

A representative from the City of Lowden participated in the Cedar County meeting; no specific feedback from the City of Lowden's perspective was shared at the meeting.

CITY OF LISBON—SEPTEMBER 6, 2018—LISBON CITY HALL, LISBON, IOWA

Overall, the City of Lisbon is neutral from a City's perspective on US 30 to the east. They feel the I-380 corridor is more important to Lisbon and that their residents depend on the Cedar

Rapids and Iowa City areas for employment and retail services. Lisbon is a bedroom community and the current bypass under construction will benefit travel time to Cedar Rapids. Participants felt the only reason residents in Lisbon travel east are for extra-curricular school events. Participants did say that an expanded four-lane US 30 to the east could provide some benefit during occasions Lisbon residents travel regionally (currently they take I-80 via IA 1 or IA 38) or provide a more attractive opportunity to travel to the Moline airport for flights with cheaper fares compared to Cedar Rapids.

Lisbon does see some retail business from residents of Mechanicsville and Stanwood (mostly at their grocery store); they feel Stanwood is the dividing line where people travel either east or west on US 30.

CITIES OF WHEATLAND AND CALAMUS

Multiple attempts to contact representatives from the Cities of Wheatland and Calamus were made, including phone calls and email. Jacobs staff connected with City Hall receptionist staff from both communities and using contact information provided reached out directly to the Mayors Schnede (Wheatland) and Leibold (Calamus). While attempts were made, confirmation of requested meeting times or a response to our requests went unanswered. Meetings were not held with these two communities.

US 30 COALITION OF IOWA—APRIL 4, 2019—STATE CAPITAL, DES MOINES, IOWA

An additional meeting with the US 30 Coalition was held on April 4, 2019, as part of the "US 30 Day at the Capitol" event (planned and organized by the US 30 Coalition). Jacobs and Iowa DOT participated in the meeting, at the request of the Coalition, and specifically discussed the status of the US 30 PEL Study in Cedar and Clinton counties. Various state legislators were present for parts of the discussion. The meeting was held at the Iowa State Capitol, Room 15. US 30 Coalition members present included representatives from Clinton, Clinton County, Carroll, Jefferson, Greene County, Missouri Valley, and Region XII Council of Governments.

Jacobs and Iowa DOT summarized the goals of the PEL Study (evaluate needs, consider a range of alternatives including possible bypasses, and prioritize possible improvements) and the status and schedule of the ongoing PEL Study. Jacobs noted the first wave of public information outreach was posted to the Iowa DOT website on April 3, 2019, and that the study is moving from the data collection and existing conditions analysis phase into the alternatives development phase of the study. A study on potential economic effects of a two-lane to four-lane roadway conversion has been added to the overall US 30 Study. The next public involvement event is scheduled for June 2019 and will be held at a location along the US 30 study corridor.

Feedback and questions expressed by the participating Coalition members included the following:

- US 30 is the second-largest population corridor in the State of Iowa.
- US 30 and the Union Pacific Railroad are critical to each other within the Cedar and Clinton County corridor. Has the Union Pacific Railroad been included in stakeholder outreach activities? *Jacobs and Iowa DOT responded that while no Union Pacific Railroad-specific*

meetings have occurred, the railroad is listed as one of the key project stakeholders and, as such, have and will continue to receive project communications and updates via the Study's public involvement activities.

- Iowa Economic Development Authority is studying trucks and intermodal relationships and needs in the State.

- When using navigation services, like Google Maps, travel between central Iowa or Cedar Rapids and Chicago is routed to I-80, even though that route is greater in distance; there is a significant volume of traffic missing from US 30 in Cedar and Clinton Counties because of this. Is this study considering how trip routing impacts the corridor and what traffic this takes away from the corridor? *Jacobs and Iowa DOT responded that it is unknown how the various navigation system algorithms are established and that many navigation services have settings, such as "interstate only" or "avoid toll roads", that can be changed. This technology is constantly changing and the demand and use of real time travel data is becoming more prevalent. The group briefly discussed how Iowa 511 information can be better used.*

- Is there any feedback being received from existing industry on trucking logistics and needs? *Jacobs and Iowa DOT noted that the known key industries, identified during our early stakeholder meetings and development of the project public involvement plan, are included in the project stakeholder contact lists and will be receiving project updates and communications through the public involvement process. The US 30 Coalition was encouraged to forward study information to key businesses in their areas; Iowa DOT is seeking as much feedback on this study as possible.*

- Businesses and industry want/need US 30 to be a four-lane facility; certified site criteria for new development eliminates the Clinton County area from consideration because of the lack of a four-lane highway.

- Now that US 20 is four lanes across the State of Iowa, the trip from the eastern to western borders of Iowa is reduced by 2 hours (cited comments previously made by DOT Commissioner Rose).

- The I-80 PEL Study considered the volume of traffic that would be drawn from the interstate to US 30, if US 30 were increased to four lanes; what was that magnitude of change? *Iowa DOT confirmed that this was considered as part of the I-80 study, but the change was not enough to sway decisions regarding needs on I-80. The magnitude of the diversion to US 30 was not known without reviewing the I-80 Study.*

- Will "leading" questions be added to the Iowa DOT website for US 30 asking stakeholders to answer questions geared towards what Iowa DOT feels is the solution for US 30? *Jacobs and Iowa DOT indicated that posting such questions for public response have not been discussed by the project team. Should any questions be posted in the future, the intent will be to gather feedback to help make decisions, not confirm solutions already identified.*

- Discussions are ongoing about increasing weight restrictions on some Iowa roads to accommodate the logging industry. If this occurs, would the same restriction changes apply to agricultural uses? If restrictions are changed, a network of roadways across the state will be needed to accommodate heavier loads.

No specific Jacobs or Iowa DOT follow-up or action items were identified during the meeting.

PRAIRIE RIVERS OF IOWA—JULY 10, 2019—PRAIRIE RIVERS OF IOWA OFFICE, AMES, IOWA

A small-group meeting with Janice Gammon (Prairie Rivers of Iowa) was held on July 10, 2019, at the Prairie Rivers of Iowa office in Ames, Iowa. Participants included Janice Gammon (Prairie Rivers of Iowa), Dan Smith (Jacobs), and Gary Harris (Iowa DOT – via telephone).

Janice provided a history of the Lincoln Highway, including how it originally came to connect Times Square in New York City and San Francisco, California; the importance of the Iowa section in orienting the eventual crossing of the Rocky Mountains; and the 1919 (post-World War I) cross-country military convoy, which used the Lincoln Highway (Dwight Eisenhower was a participant in the convoy). The 1919 convoy encountered sections of the Lincoln Highway that could not accommodate the size of military vehicles; this convoy and their experiences may have led to the initial conception of the interstate highway system. Janice said that the Old Lincoln Highway is still used by convoys, namely a group whose mission is to preserve the Old Lincoln Highway. This group holds an annual drive from New York to California. In Iowa, the Old Lincoln Highway is part of the Lincoln Byway, the first heritage byway in Iowa.

Janice and the Lincoln Highway stakeholder groups she interacts with are most interested in the section of the Study corridor near the Wapsipinicon River crossing east of Wheatland. The three original bridges of the Old Lincoln Highway are still present, only one of which is open to traffic. There are also still remnants of the Old Lincoln Highway pavement and corridor present through the wooded forest areas. There are currently stakeholder groups interested in making this area a historic destination due to its history and the scenery of the surrounding area. Plans include adding trails and interpretive informational features near the site of an old amusement park just south of the Old Lincoln Highway near the original middle river crossing bridge. Groups interested in the trail development include the Lincoln Byway committee and Hometown Pride groups in Calamus and Wheatland. Clinton County is currently performing a feasibility study of the Old Lincoln Highway Bridge over the Wapsi River for possible use as a multi-use trail and/or snowmobile path.

The following other general comments regarding the existing US 30 corridor were provided by Janice:

- The practice of transitioning old sections of state highways to County jurisdictions is not sustainable; counties don't have the resources to maintain and preserve added lane miles, especially if bridges are involved.

- The groups interested in preserving the history of the Old Lincoln Highway would prefer to see US 30 remain a two-lane highway as it matches the features of the original highway.

- A Super-2 highway seems like a reasonable option if something needs to be done; she and the Lincoln Highway stakeholder groups would not be in favor of a four-lane highway.

- Her experience traveling the corridor suggests there is not a lot of traffic, and no overall transportation problem between Cedar Rapids and DeWitt.

- As part of the Byway system, the intent would be for travelers to slow down, enjoy the scenery and attractions, and spend money along the Old Lincoln Highway corridor; expanding US 30 to a four-lane roadway will hurt this intent—a four-lane highway only promotes faster travel between Points A and B.

- Bypassing the communities in the Study area will likely hurt them; Clarence, with its Main Street Program, is probably the most organized of the communities and most likely to suffer the least negative effect if a bypass were constructed.

- Expanding US 30 to a four-lane roadway will not stimulate growth in the small communities along the corridor—maybe a gas station or fast food restaurant after a period of time. Expanding US 30 will do more harm than good to the local communities.

Janice attended the US 30 PEL Public Involvement Meeting (PIM) #2 in June and has submitted comments via the Iowa DOT Public Involvement website. She talked with Iowa DOT staff at the PIM #2 meeting who said she would be added to the stakeholder and project communication contact list.

Jacobs and Iowa DOT provided a very high-level overview of the findings to date and overall schedule of the study. They also noted a third PIM meeting will be held in the coming weeks.

No specific Jacobs or Iowa DOT follow-up or action items were identified during the meeting.

APPENDIX A
SUMMARY OF US 30 PEL SMALL GROUP MEETINGS

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The Jacobs project team and Iowa DOT met with local project stakeholders through a series of small-group meetings to solicit input on the current functionality and future needs of the US 30 corridor. These meetings were scheduled with key individuals representing each jurisdiction (i.e., mayors, city administrators, county engineers, transportation department heads, etc.). These key individuals were encouraged to invite others representing their agency, including, but not limited to, law enforcement/first responders, public works, school districts, city council/board of supervisors, chambers of commerce, or any other key local stakeholder group or individual that could share their transportation thoughts from the stakeholder jurisdiction/organization perspective. The purpose of the small-group meetings was to gather initial input from key stakeholder representatives on the US 30 Preliminary and Environmental Linkages (PEL) Study and to discuss planned public outreach efforts.

Jacobs led and facilitated the open-forum meetings. Iowa DOT staff were present at all meetings, assisted in meeting facilitation, and shared information and ideas from the State's perspective. Jacobs and Iowa DOT introduced the PEL study process being used for the US 30 Study to each of the stakeholder groups, and shared the overarching goals and deliverables of the Study. The importance of stakeholder feedback was emphasized to each of the stakeholder groups, and the various opportunities for them to share input and ideas throughout the study was presented.

The following sections summarize the key takeaways from each of the stakeholder small group meetings.

CITY OF GRAND MOUND—AUGUST 13, 2018—GRAND MOUND CITY HALL

Participants representing the City of Grand Mound's perspective suggested that US 30 meets the needs of the community today; however, expanding US 30 to a four-lane facility would help attract new businesses and residential development.

From a safety perspective, the participants noted that there are frequent near misses and some crashes at the DeWitt Street and E Street intersections with US 30; these intersections are skewed and come off of the US 30 roadway curves.

Participants overall were not opposed to consideration of bypass alternatives around town, although some voiced a concern of keeping US 30 on alignment to support the businesses that are present along the corridor today. Participants noted that bypass alternatives should be considered in light of the following:

- Existing industry in Grand Mound is primarily north of US 30; a bypass to the south would pull this traffic through residential parts of the community and require crossing of the Union Pacific Railroad tracks.
- City sewage lagoons are located south of town and would be a constraint.
- Connecting US 30 to the south US 30/US 61 interchange at DeWitt would make sense.

The City currently does not have a formal land use or development plan for future growth. A community development group has recently formed locally and is currently performing a

survey of the Grand Mound residents to understand the workforce demographics and places of employment, including distance traveled to and from work. Current development in Grand Mound includes the expansion and relocation of a local trucking firm from an in-town location to a site on the west edge of town; this trucking company has 30 semitruck operators, and the new site will include a truck wash.

US 30 COALITION OF IOWA—AUGUST 14—EAGLE POINT LODGE, CLINTON, IOWA

The US 30 Coalition of Iowa has more than 200 members on its official mailing list and over 550 Facebook followers. The Coalition is passionate about expanding US 30 to four lanes across the State of Iowa, following in the footsteps of US 20. The Coalition's justification for expanding US 30 to a four-lane facility is to improve inter- and intra-state travel, spurring economic development throughout the US 30 corridor. The US 30 Coalition sees US 20 as a model corridor, and its perception is that communities along US 20 are now flourishing because of the highway expansion. The Coalition feels that a similar expansion of US 30 can turn around the slowly declining population and industry trends, particularly in the Clinton area.

The Coalition expressed its views of US 30 around five key points:

- Existing and future truck demands in the corridor and how this demand limits capacity, mobility, and safety performance; future trucking demands increase with the presence of intermodal facilities in Clinton and those planned near Cedar Rapids.
- This 40-mile section of US 30 has unreliable travel speeds and times displacing traffic that would normally use US 30 to other more reliable routes, such as I-80, even if travel distances and overall travel time is greater; they feel there is a sizable percentage of US 30 traffic that does not show up on US 30 because of this reliability concern.
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CEDAR COUNTY COMMUNITIES (MECHANICSVILLE, STANWOOD, AND CLARENCE)—AUGUST 16, 2018—CLARENCE PUBLIC LIBRARY

The primary feedback from the communities of Mechanicsville, Stanwood, and Clarence was that it would be beneficial to bypass the communities with an improved corridor for US 30. The stakeholders felt this way due to the increasing number of trucks traveling along the corridor and safety concerns through town. The only opposition voiced to a bypass was from the

City of Clarence main street group, representing the current business along the corridor. Their preference is to keep traffic coming through Clarence to support their existing businesses. They also noted that the current on-street parking along US 30 is important, and removal of the parking would hurt the businesses. Stanwood representatives noted that there are existing businesses in Stanwood along US 30 but felt that those business would still thrive with a bypass, assuming the bypass was not too far from town. They also acknowledged that if a bypass is the best solution, and some existing businesses are hurt, the benefits of redevelopment and added development opportunities would outweigh the negative risks.

All stakeholders agreed that the Union Pacific Railroad corridor causes problems; when the tracks are in use, queues and traffic disruptions ripple onto US 30, resulting in travel delay and an increase in minor traffic crashes. Because of the railroad presence, all communities felt a bypass to the south would be most beneficial. They see a southerly bypass as an opportunity, as long as the bypass is not too far from town, to grow and develop between the existing City limits and the bypass roadway. A cemetery south of Stanwood would be a constraint that needs to be avoided with a southerly bypass.

Concerns with a bypass included added emergency service response times, rerouting of school buses, and possible safety issues with intersections along a four-lane divided freeway. The participants suggested roadway overpass structures and grade-separated intersections to improve safety.

The participants noted that their communities are bedroom communities and agriculture-oriented, with the vast majority of their residents commuting out for work. They see an improved US 30 corridor as being an attractive draw for residential growth in the future. Removing the heavy through traffic from town, improving the railroad crossing situation, and having a modern reliable roadway nearby would improve the quality of life and promote the residential growth in the communities. With the low unemployment rates, residential development expanding the workforce pool would benefit not only the corridor but also employers in the Cedar Rapids, Clinton, DeWitt, Iowa City, and the Quad Cities areas.

Participants suggested that expanding US 30 to four lanes would be an economic benefit to the area, encouraging development of small, medium, and large industry. The improved roadway facility may also spur the Union Pacific Railroad to consider additional sidings.

EAST CENTRAL INTERGOVERNMENTAL ASSOCIATION (ECIA)—AUGUST 17, 2018—ECIA OFFICES, DUBUQUE, IOWA

The ECIA prepared an eight-county freight study in support of its long-range plan. The eight-county study included Clinton but not Cedar County. The freight study concluded that freight movement via rail is maxed out in the area, while barge transport and trucking remain viable and growing opportunities. The study noted that the volume of freight moved by truck in the region is greater than the national average. The freight study remained neutral on what improvements are warranted for the US 30 corridor but did recommend that improvements occur.

Through development of the freight study, ECIA received lots of input from carriers and shippers in the Clinton area. They also learned that some carriers route their trucks down US 61 to I-80

to I-380 rather than taking US 30 through Clinton and Cedar Counties. The carriers take the longer and more costly routes because of the safety and reliability of I-80; carriers perceive the four-lane roadway safer with more consistent travel times compared to US 30.

From a capacity standpoint, ECIA indicated that the existing two-lane corridor serves the need and doubling the volume of traffic still results in acceptable operations and mobility per their models. ECIA understands the local pressure and desire of expanding to four lanes but notes the data alone does not show a need.

CEDAR COUNTY—AUGUST 17, 2018—CEDAR COUNTY COURTHOUSE, TIPTON, IOWA

Cedar County feels that the corridor has a lot to gain economically by expanding US 30 to a four-lane facility. Cedar County is a rural county surrounded by more developed urban areas such as Cedar Rapids, Clinton, Iowa City, and the Quad Cities. Expanding US 30 would bring more residential development to the corridor and make commuting to these urban areas more efficient. Cedar County noted that residential growth from Linn County is starting to bleed into Cedar County.

Participants indicated that overall, US 30 meets the current travel needs but noted that the corridor does become congested during peak hours with commuters, trucks, and school buses. The increase in truck traffic is a particular concern; with the County starting to see grain trucks and operations pop up all over the County where they were not previously expected. For a US 30 four-lane in Iowa to provide all the benefits desired, a four-lane connecting to I-88 in Illinois is also important.

Participants also stressed the importance of US 30 being able to serve as a relief route to I-80 and I-380. When construction or crashes occur, the US 30 corridor receives significant volumes of traffic from I-80 and I-380. They provided a recent example of where a crash impacted I-80; during that incident, traffic was bumper to bumper along IA 38 and IA 1 trying to reach US 30. Improvements to US 30 from IA 38 to the west is seen as the area of most need for improvement.

Local roads in Cedar County are spaced approximately every mile along US 30, and the County will need to closely coordinate with any local roadway relocations included with the US 30 projects. The County also noted flooding history near Lowden and along Yankee Run Creek in Clinton County; an existing watershed parallels US 30.

The County's perspective on bypasses is that they should be considered on a city-by-city basis, and the acceptability of a bypass would likely vary, depending on a given city's needs. The County did express safety concerns with a new four-lane facility with at-grade intersections; if a new four-lane roadway is constructed, it should be access controlled with interchanges.

A representative from the City of Lowden participated in the Cedar County meeting; no specific feedback from the City of Lowden's perspective was shared at the meeting.

CITY OF LISBON—SEPTEMBER 6, 2018—LISBON CITY HALL, LISBON, IOWA

Overall, the City of Lisbon is neutral from a City's perspective on US 30 to the east. They feel the I-380 corridor is more important to Lisbon and that their residents depend on the Cedar

Rapids and Iowa City areas for employment and retail services. Lisbon is a bedroom community and the current bypass under construction will benefit travel time to Cedar Rapids. Participants felt the only reason residents in Lisbon travel east are for extra-curricular school events. Participants did say that an expanded four-lane US 30 to the east could provide some benefit during occasions Lisbon residents travel regionally (currently they take I-80 via IA 1 or IA 38) or provide a more attractive opportunity to travel to the Moline airport for flights with cheaper fares compared to Cedar Rapids.

Lisbon does see some retail business from residents of Mechanicsville and Stanwood (mostly at their grocery store); they feel Stanwood is the dividing line where people travel either east or west on US 30.

CITIES OF WHEATLAND AND CALAMUS

Multiple attempts to contact representatives from the Cities of Wheatland and Calamus were made, including phone calls and email. Jacobs staff connected with City Hall receptionist staff from both communities and using contact information provided reached out directly to the Mayors Schnede (Wheatland) and Leibold (Calamus). While attempts were made, confirmation of requested meeting times or a response to our requests went unanswered. Meetings were not held with these two communities.

US 30 COALITION OF IOWA—APRIL 4, 2019—STATE CAPITAL, DES MOINES, IOWA

An additional meeting with the US 30 Coalition was held on April 4, 2019, as part of the "US 30 Day at the Capitol" event (planned and organized by the US 30 Coalition). Jacobs and Iowa DOT participated in the meeting, at the request of the Coalition, and specifically discussed the status of the US 30 PEL Study in Cedar and Clinton counties. Various state legislators were present for parts of the discussion. The meeting was held at the Iowa State Capitol, Room 15. US 30 Coalition members present included representatives from Clinton, Clinton County, Carroll, Jefferson, Greene County, Missouri Valley, and Region XII Council of Governments.

Jacobs and Iowa DOT summarized the goals of the PEL Study (evaluate needs, consider a range of alternatives including possible bypasses, and prioritize possible improvements) and the status and schedule of the ongoing PEL Study. Jacobs noted the first wave of public information outreach was posted to the Iowa DOT website on April 3, 2019, and that the study is moving from the data collection and existing conditions analysis phase into the alternatives development phase of the study. A study on potential economic effects of a two-lane to four-lane roadway conversion has been added to the overall US 30 Study. The next public involvement event is scheduled for June 2019 and will be held at a location along the US 30 study corridor.

Feedback and questions expressed by the participating Coalition members included the following:

- US 30 is the second-largest population corridor in the State of Iowa.
- US 30 and the Union Pacific Railroad are critical to each other within the Cedar and Clinton County corridor. Has the Union Pacific Railroad been included in stakeholder outreach activities? *Jacobs and Iowa DOT responded that while no Union Pacific Railroad-specific*

meetings have occurred, the railroad is listed as one of the key project stakeholders and, as such, have and will continue to receive project communications and updates via the Study's public involvement activities.

- Iowa Economic Development Authority is studying trucks and intermodal relationships and needs in the State.

- When using navigation services, like Google Maps, travel between central Iowa or Cedar Rapids and Chicago is routed to I-80, even though that route is greater in distance; there is a significant volume of traffic missing from US 30 in Cedar and Clinton Counties because of this. Is this study considering how trip routing impacts the corridor and what traffic this takes away from the corridor? *Jacobs and Iowa DOT responded that it is unknown how the various navigation system algorithms are established and that many navigation services have settings, such as "interstate only" or "avoid toll roads", that can be changed. This technology is constantly changing and the demand and use of real time travel data is becoming more prevalent. The group briefly discussed how Iowa 511 information can be better used.*

- Is there any feedback being received from existing industry on trucking logistics and needs? *Jacobs and Iowa DOT noted that the known key industries, identified during our early stakeholder meetings and development of the project public involvement plan, are included in the project stakeholder contact lists and will be receiving project updates and communications through the public involvement process. The US 30 Coalition was encouraged to forward study information to key businesses in their areas; Iowa DOT is seeking as much feedback on this study as possible.*

- Businesses and industry want/need US 30 to be a four-lane facility; certified site criteria for new development eliminates the Clinton County area from consideration because of the lack of a four-lane highway.

- Now that US 20 is four lanes across the State of Iowa, the trip from the eastern to western borders of Iowa is reduced by 2 hours (cited comments previously made by DOT Commissioner Rose).

- The I-80 PEL Study considered the volume of traffic that would be drawn from the interstate to US 30, if US 30 were increased to four lanes; what was that magnitude of change? *Iowa DOT confirmed that this was considered as part of the I-80 study, but the change was not enough to sway decisions regarding needs on I-80. The magnitude of the diversion to US 30 was not known without reviewing the I-80 Study.*

- Will "leading" questions be added to the Iowa DOT website for US 30 asking stakeholders to answer questions geared towards what Iowa DOT feels is the solution for US 30? *Jacobs and Iowa DOT indicated that posting such questions for public response have not been discussed by the project team. Should any questions be posted in the future, the intent will be to gather feedback to help make decisions, not confirm solutions already identified.*

- Discussions are ongoing about increasing weight restrictions on some Iowa roads to accommodate the logging industry. If this occurs, would the same restriction changes apply to agricultural uses? If restrictions are changed, a network of roadways across the state will be needed to accommodate heavier loads.

No specific Jacobs or Iowa DOT follow-up or action items were identified during the meeting.

PRAIRIE RIVERS OF IOWA—JULY 10, 2019—PRAIRIE RIVERS OF IOWA OFFICE, AMES, IOWA

A small-group meeting with Janice Gammon (Prairie Rivers of Iowa) was held on July 10, 2019, at the Prairie Rivers of Iowa office in Ames, Iowa. Participants included Janice Gammon (Prairie Rivers of Iowa), Dan Smith (Jacobs), and Gary Harris (Iowa DOT – via telephone).

Janice provided a history of the Lincoln Highway, including how it originally came to connect Times Square in New York City and San Francisco, California; the importance of the Iowa section in orienting the eventual crossing of the Rocky Mountains; and the 1919 (post-World War I) cross-country military convoy, which used the Lincoln Highway (Dwight Eisenhower was a participant in the convoy). The 1919 convoy encountered sections of the Lincoln Highway that could not accommodate the size of military vehicles; this convoy and their experiences may have led to the initial conception of the interstate highway system. Janice said that the Old Lincoln Highway is still used by convoys, namely a group whose mission is to preserve the Old Lincoln Highway. This group holds an annual drive from New York to California. In Iowa, the Old Lincoln Highway is part of the Lincoln Byway, the first heritage byway in Iowa.

Janice and the Lincoln Highway stakeholder groups she interacts with are most interested in the section of the Study corridor near the Wapsipinicon River crossing east of Wheatland. The three original bridges of the Old Lincoln Highway are still present, only one of which is open to traffic. There are also still remnants of the Old Lincoln Highway pavement and corridor present through the wooded forest areas. There are currently stakeholder groups interested in making this area a historic destination due to its history and the scenery of the surrounding area. Plans include adding trails and interpretive informational features near the site of an old amusement park just south of the Old Lincoln Highway near the original middle river crossing bridge. Groups interested in the trail development include the Lincoln Byway committee and Hometown Pride groups in Calamus and Wheatland. Clinton County is currently performing a feasibility study of the Old Lincoln Highway Bridge over the Wapsi River for possible use as a multi-use trail and/or snowmobile path.

The following other general comments regarding the existing US 30 corridor were provided by Janice:

- The practice of transitioning old sections of state highways to County jurisdictions is not sustainable; counties don't have the resources to maintain and preserve added lane miles, especially if bridges are involved.

- The groups interested in preserving the history of the Old Lincoln Highway would prefer to see US 30 remain a two-lane highway as it matches the features of the original highway.

- A Super-2 highway seems like a reasonable option if something needs to be done; she and the Lincoln Highway stakeholder groups would not be in favor of a four-lane highway.

- Her experience traveling the corridor suggests there is not a lot of traffic, and no overall transportation problem between Cedar Rapids and DeWitt.

- As part of the Byway system, the intent would be for travelers to slow down, enjoy the scenery and attractions, and spend money along the Old Lincoln Highway corridor; expanding US 30 to a four-lane roadway will hurt this intent—a four-lane highway only promotes faster travel between Points A and B.

- Bypassing the communities in the Study area will likely hurt them; Clarence, with its Main Street Program, is probably the most organized of the communities and most likely to suffer the least negative effect if a bypass were constructed.

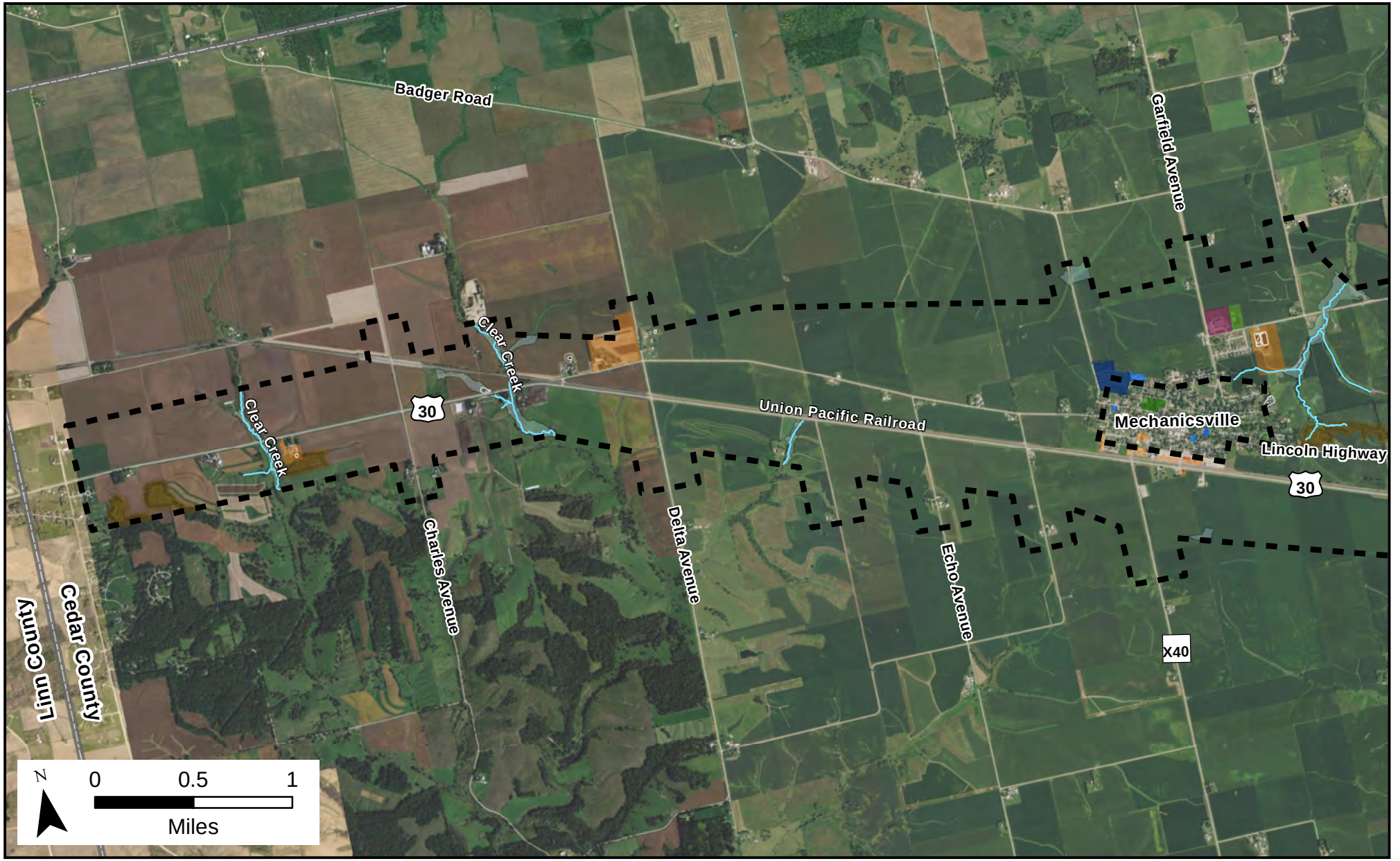
- Expanding US 30 to a four-lane roadway will not stimulate growth in the small communities along the corridor—maybe a gas station or fast food restaurant after a period of time. Expanding US 30 will do more harm than good to the local communities.

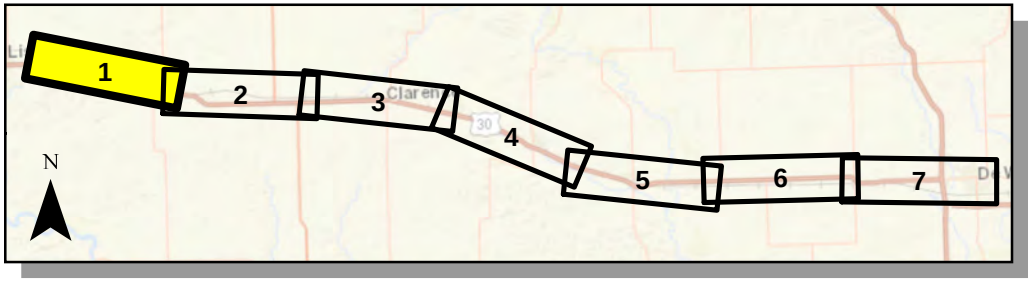
Janice attended the US 30 PEL Public Involvement Meeting (PIM) #2 in June and has submitted comments via the Iowa DOT Public Involvement website. She talked with Iowa DOT staff at the PIM #2 meeting who said she would be added to the stakeholder and project communication contact list.

Jacobs and Iowa DOT provided a very high-level overview of the findings to date and overall schedule of the study. They also noted a third PIM meeting will be held in the coming weeks.

No specific Jacobs or Iowa DOT follow-up or action items were identified during the meeting.

APPENDIX B
PRELIMINARY ENVIRONMENTAL CONSTRAINTS AND LAND USE MAPS





- Study Area
- Sovereign Lands
- Protected Rivers
- Waterways
- Wetlands
- Floodplains
- Recreational Areas
- Woodlands
- Cemeteries
- Churches
- Schools
- Regulated Materials

ENVIRONMENTAL CONSTRAINTS

US 30 Preliminary and Environmental Linkages Study

Imagery Source: Esri ArcGIS Online World Imagery
Data Source: Iowa DOT

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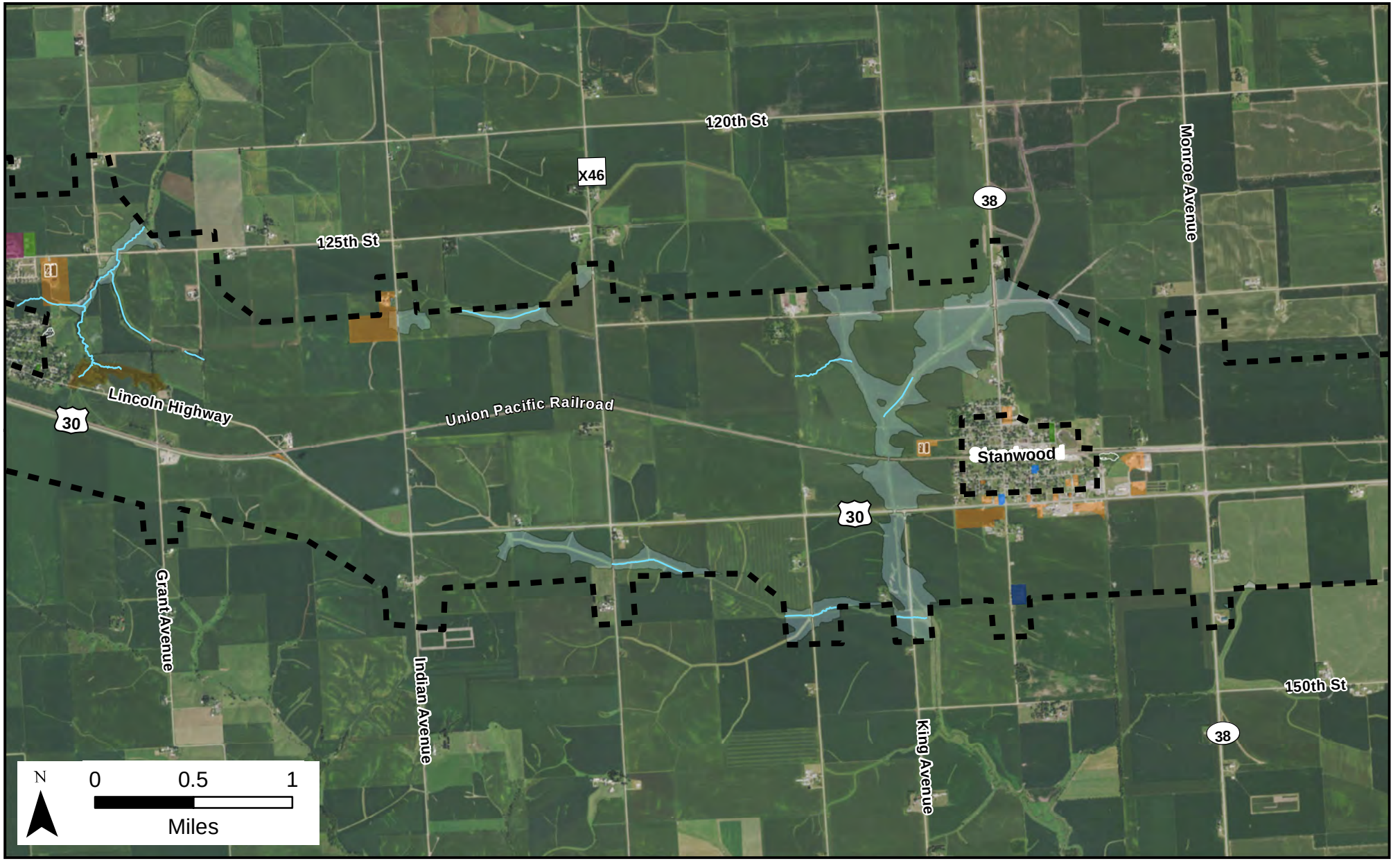

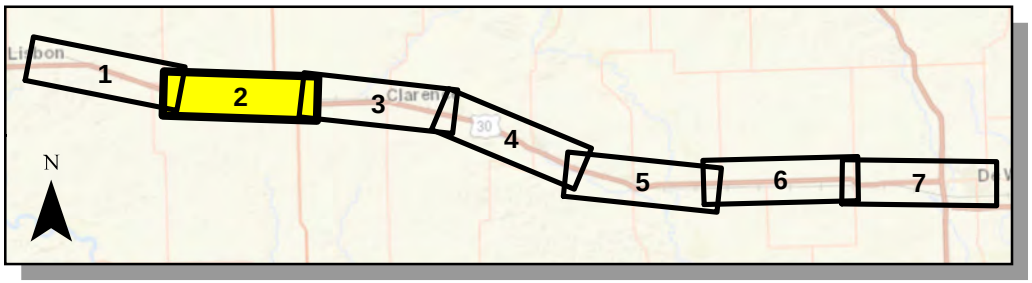

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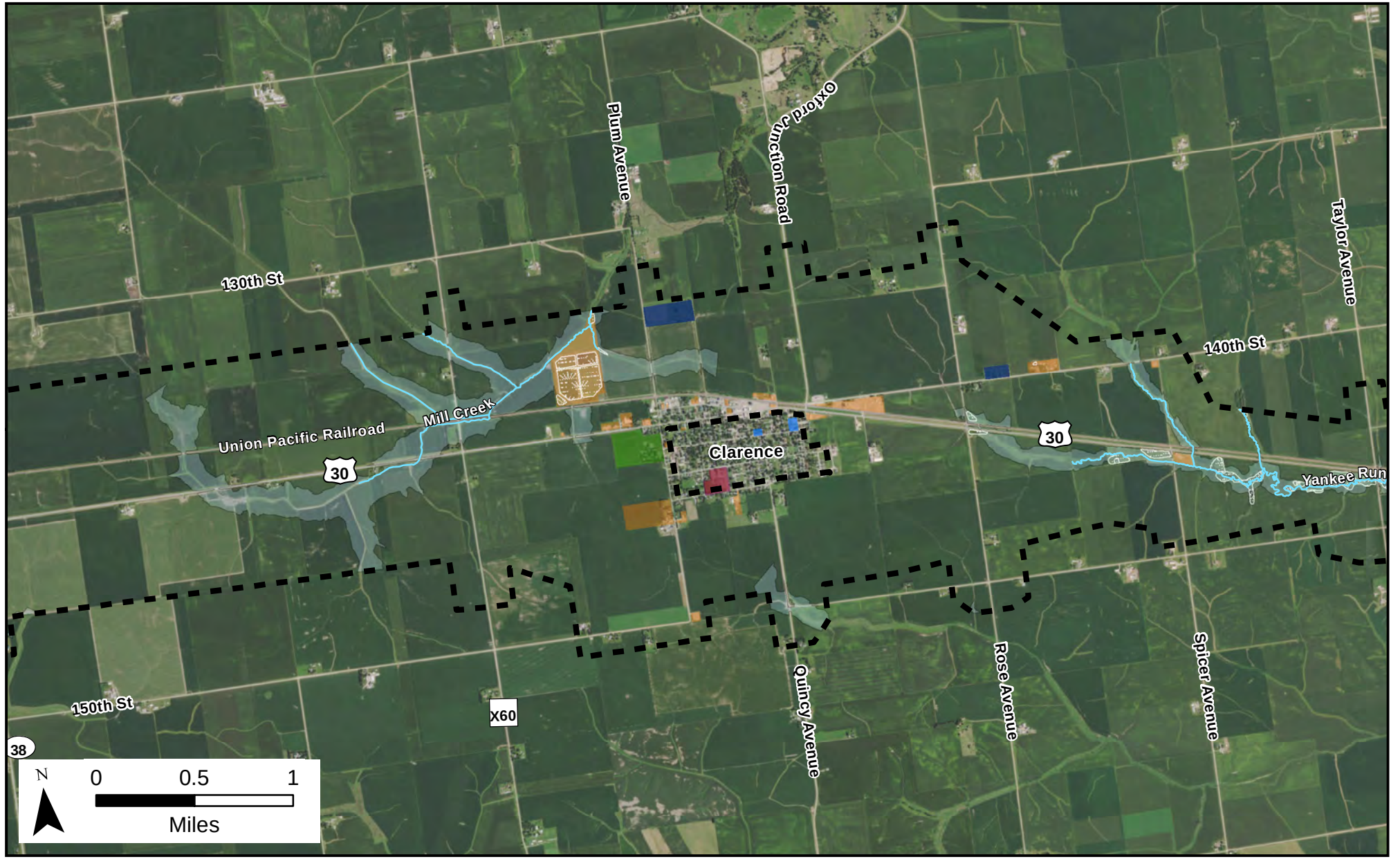

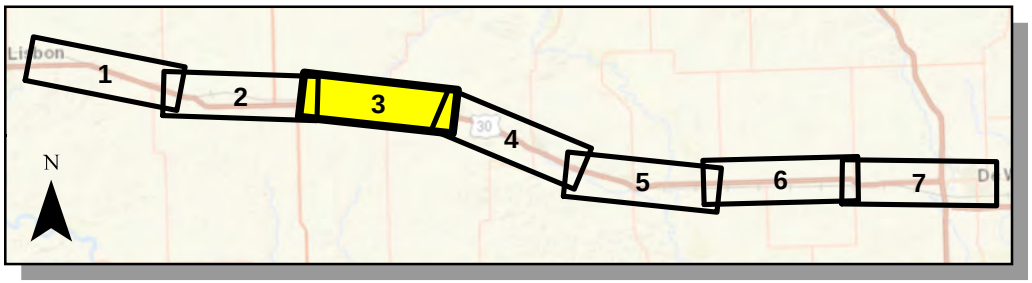

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ENVIRONMENTAL CONSTRAINTS

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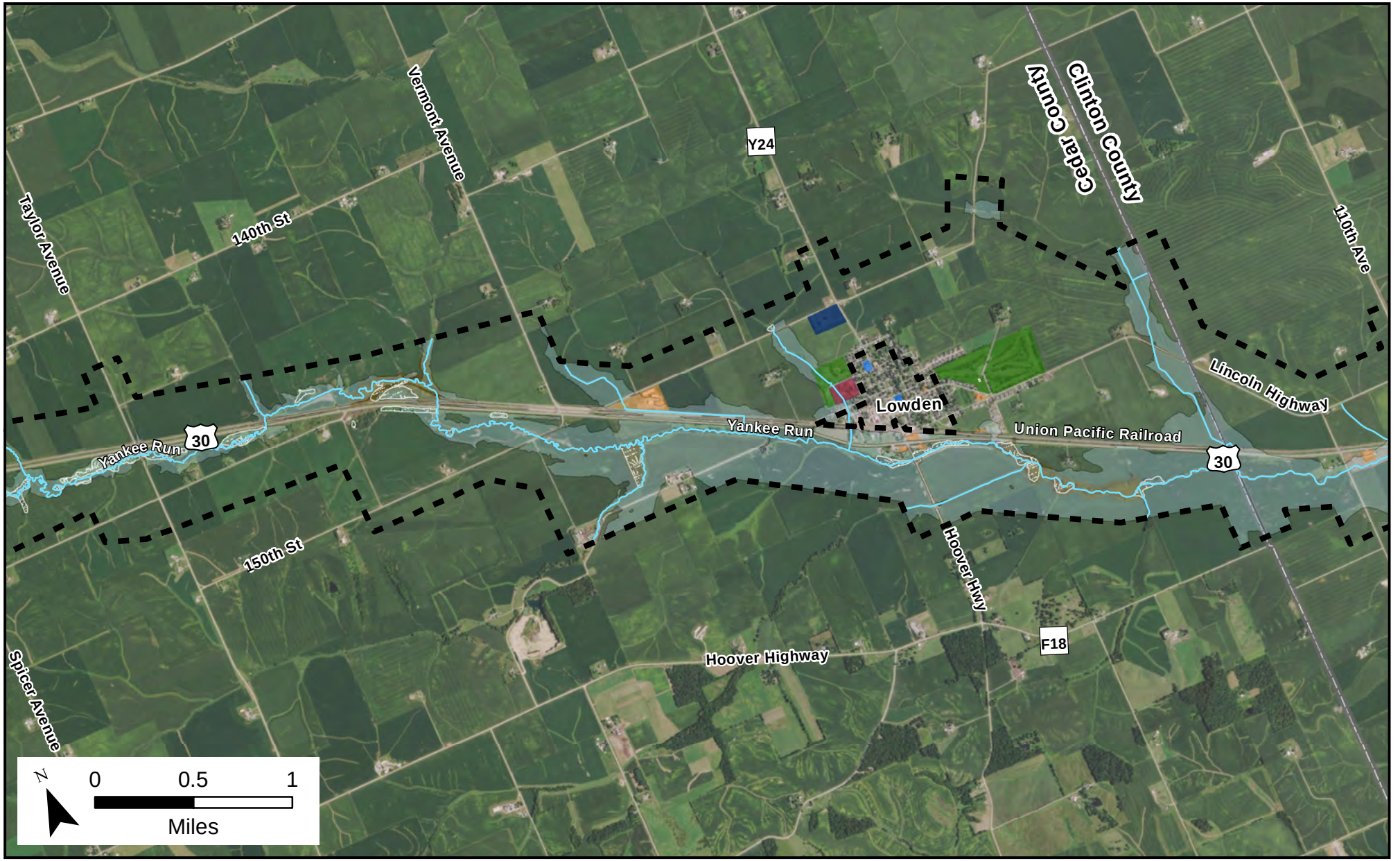

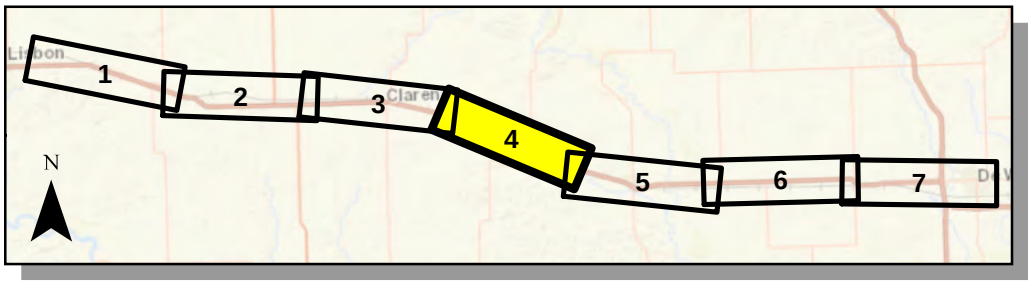

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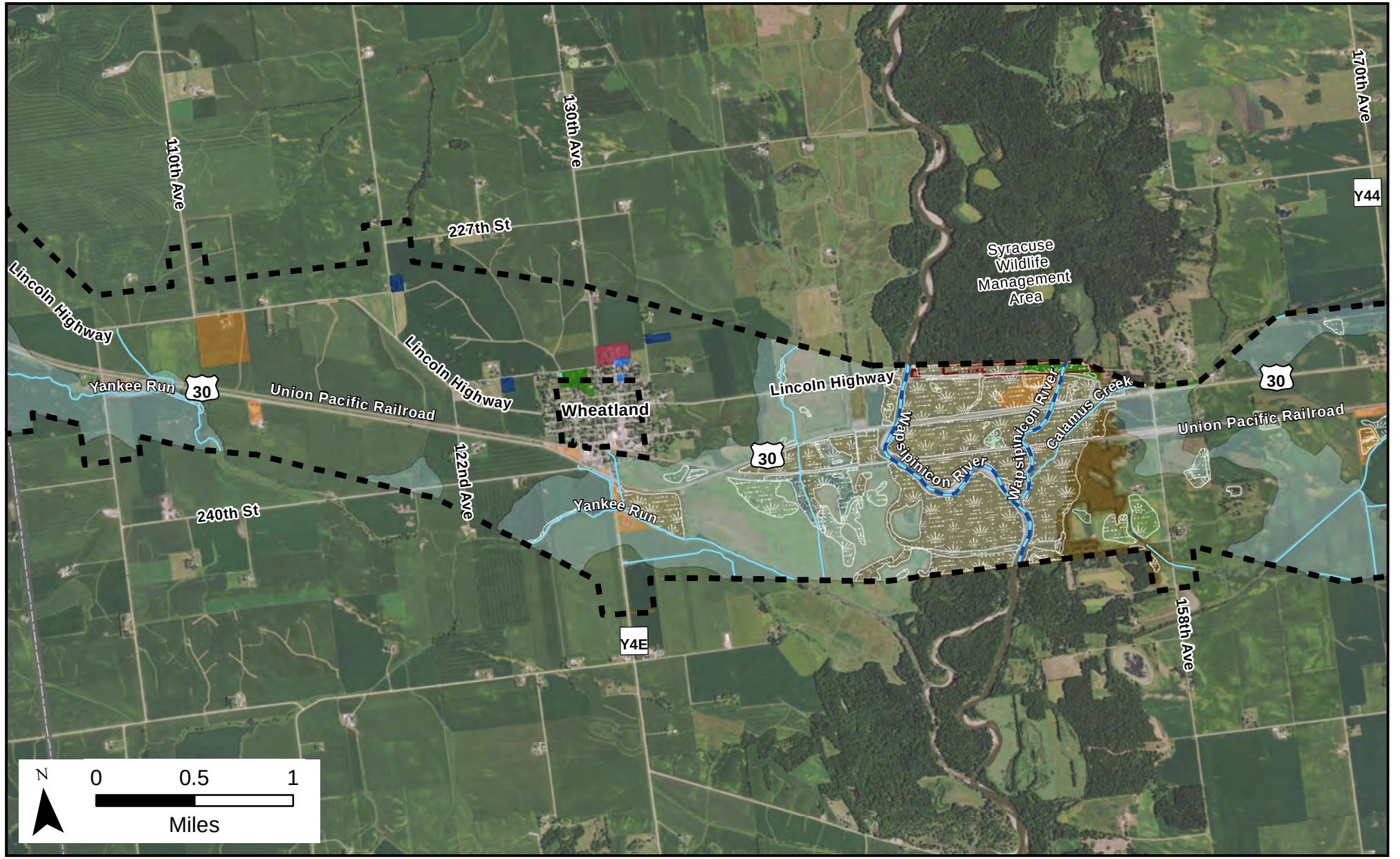

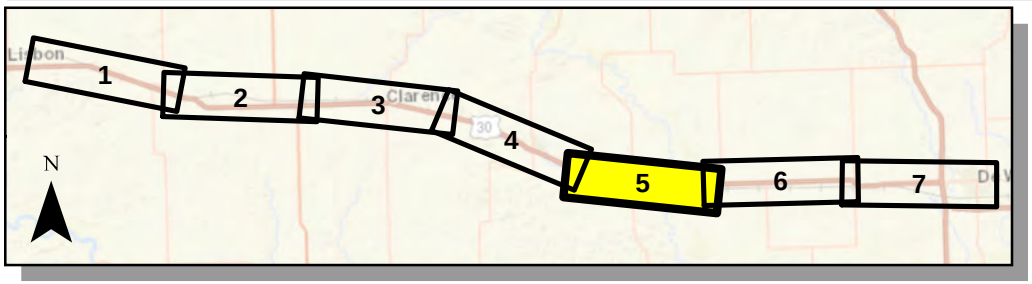

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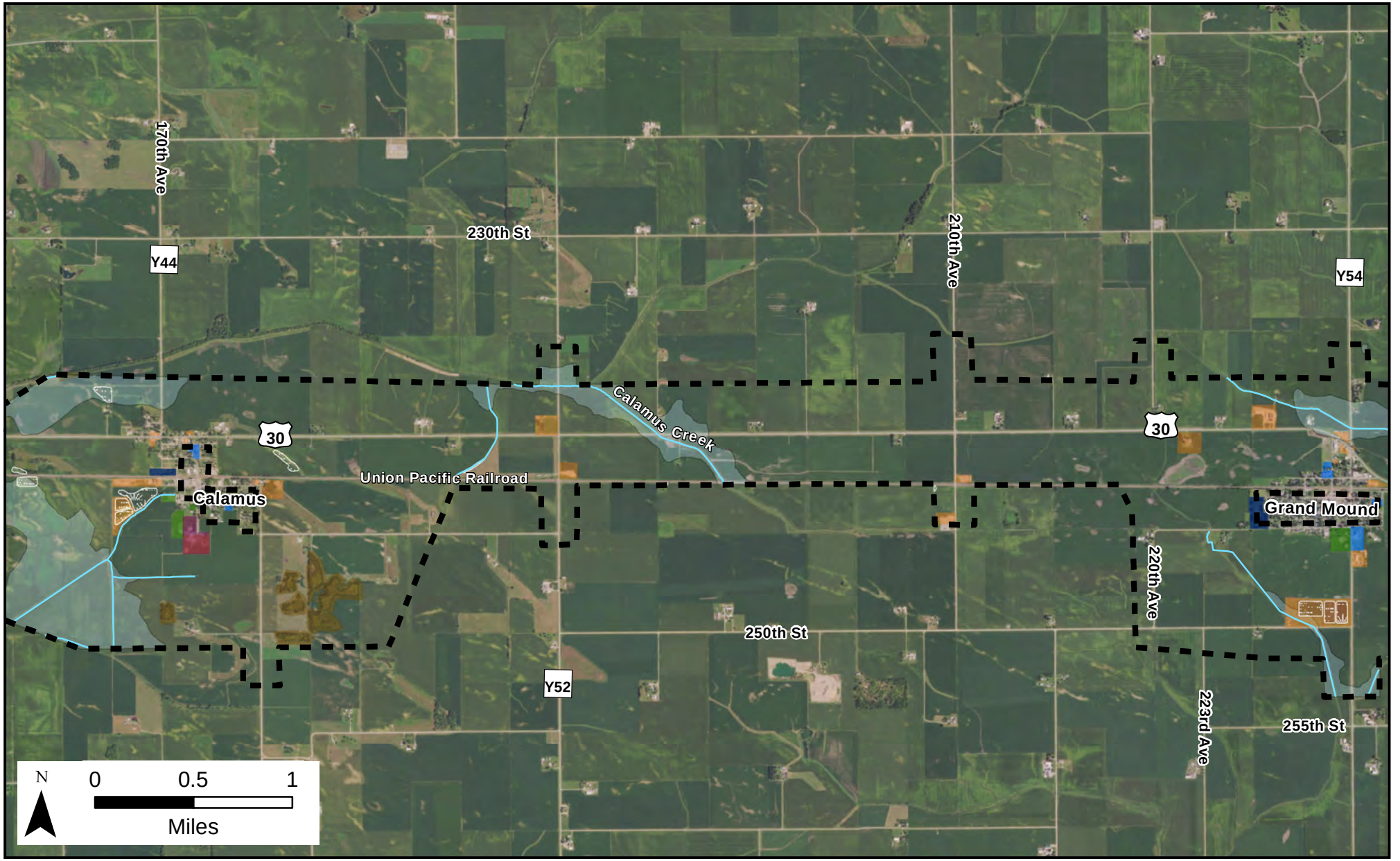

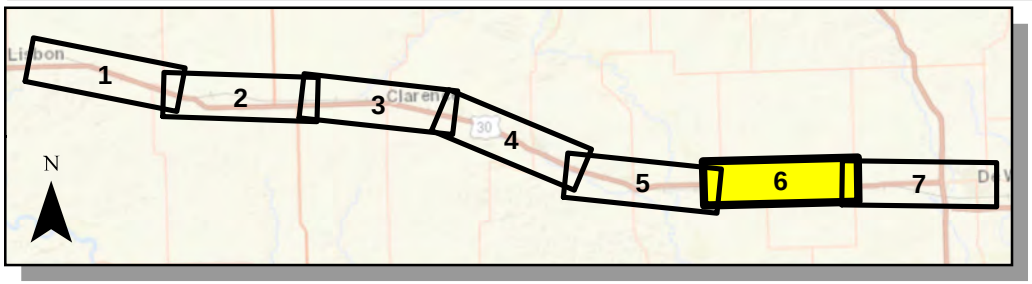

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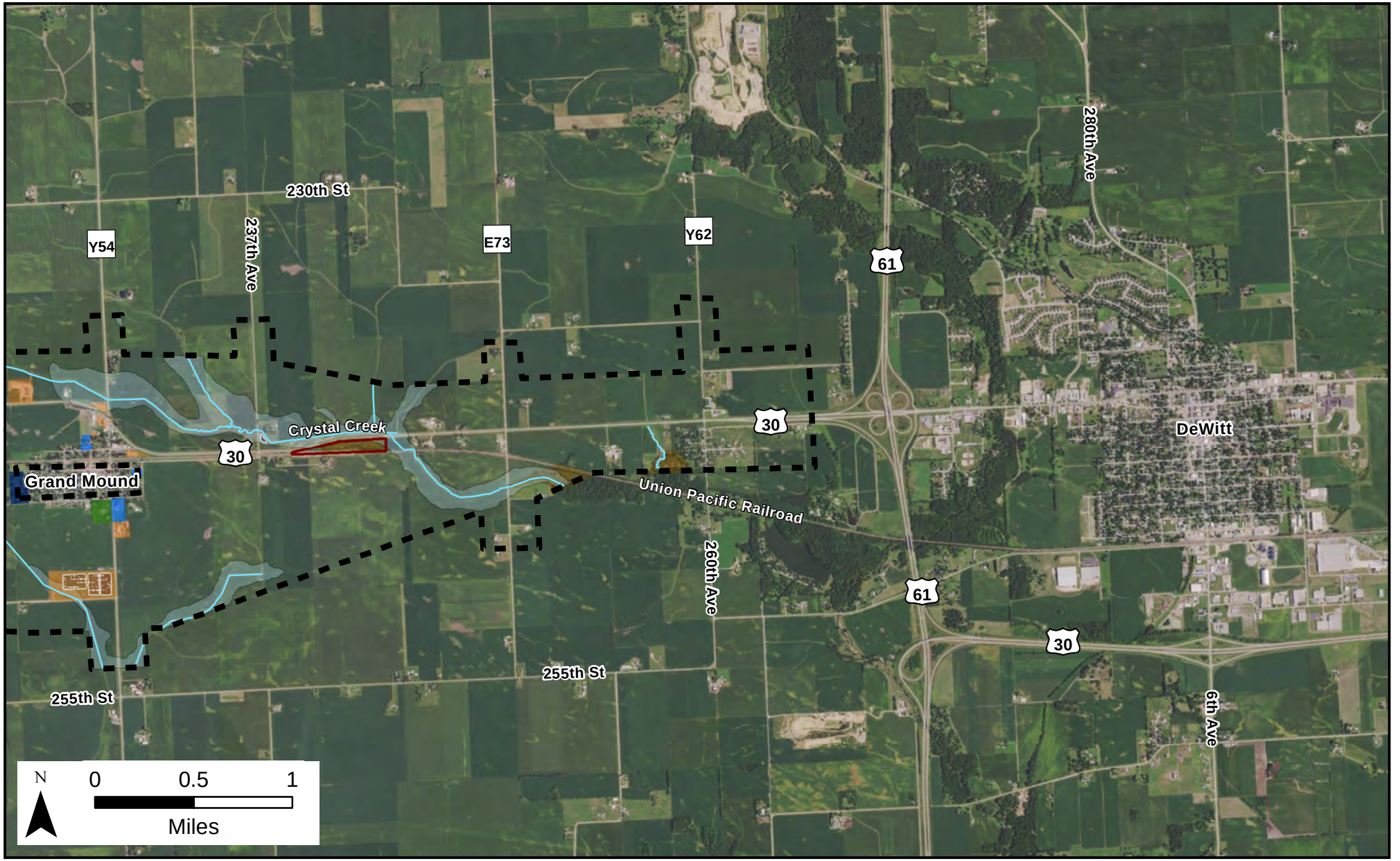

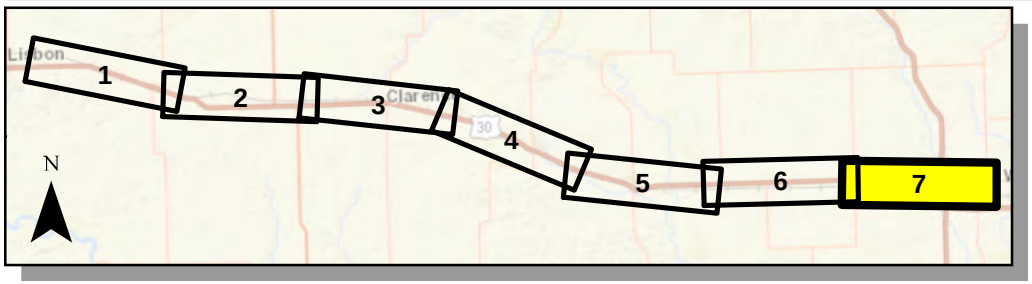

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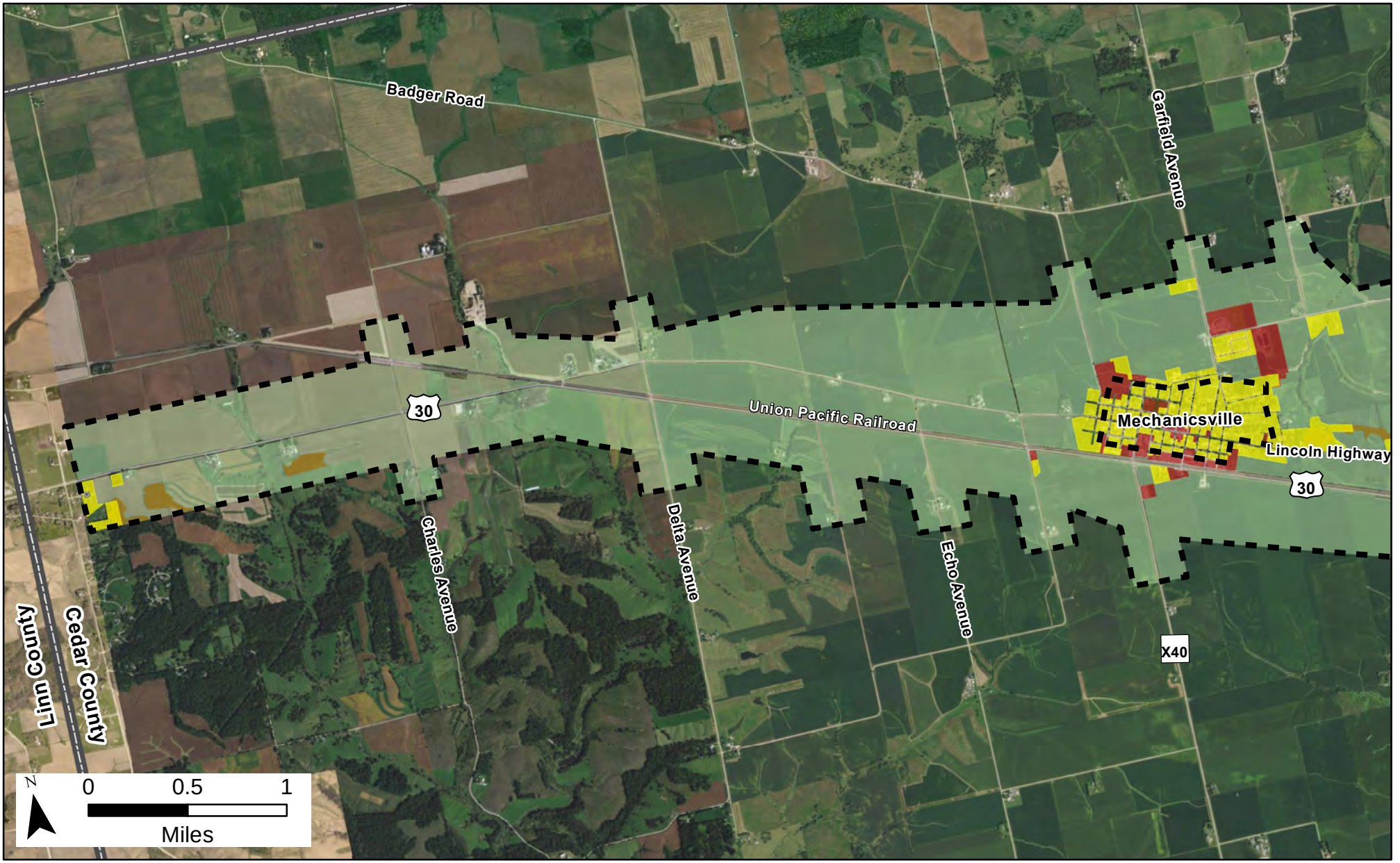

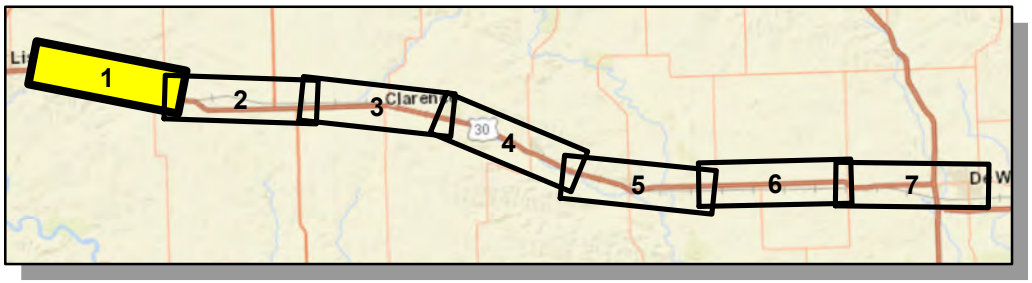

Study Area
Residential
Commercial
Agriculture
Recreational Areas
Woodlands

EXISTING LAND USE

US 30 Preliminary and Environmental Linkages Study

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Data Source: Iowa DOT

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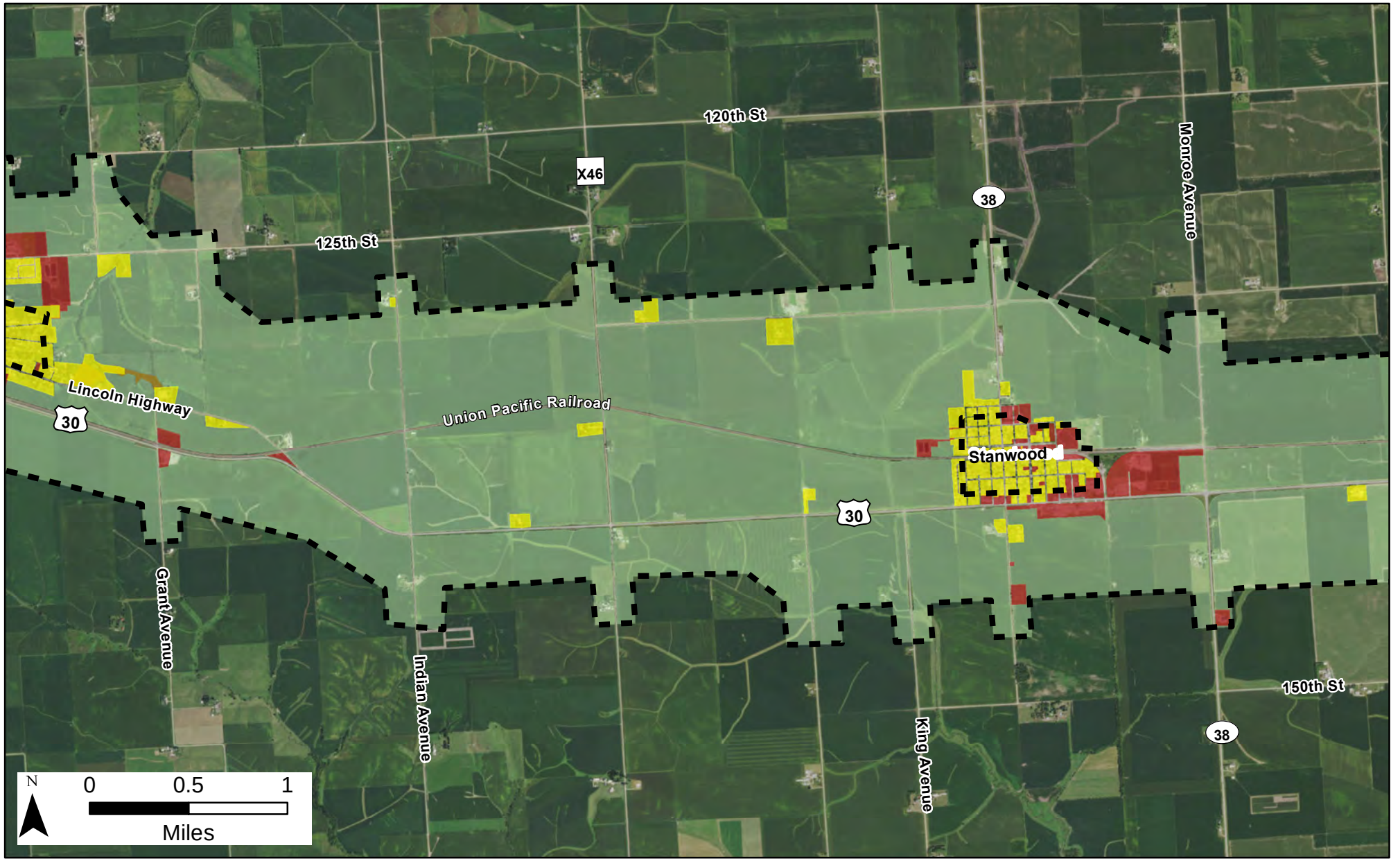

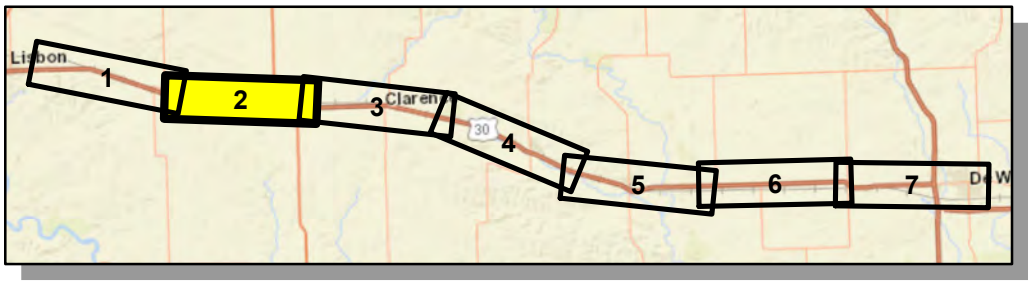

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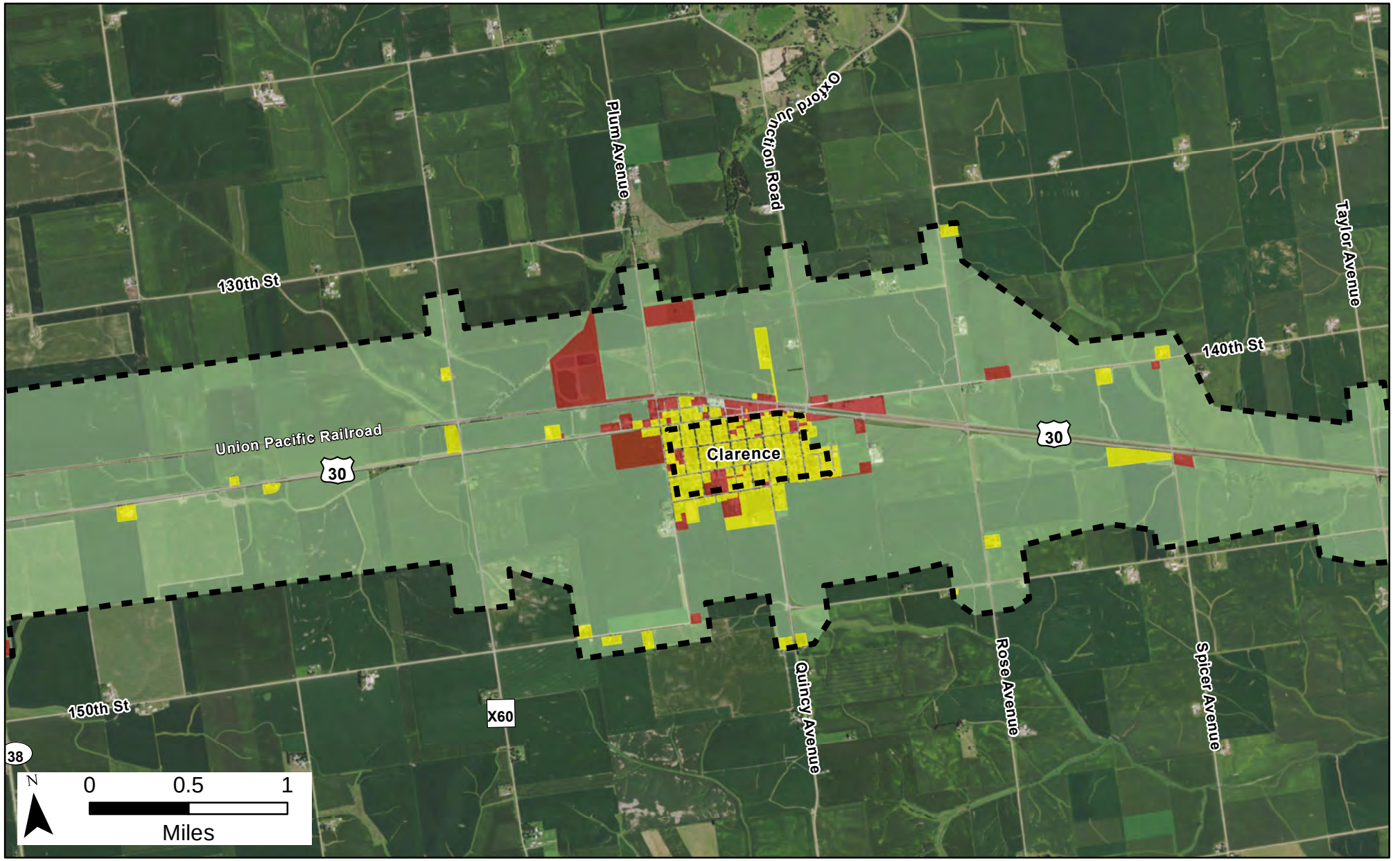

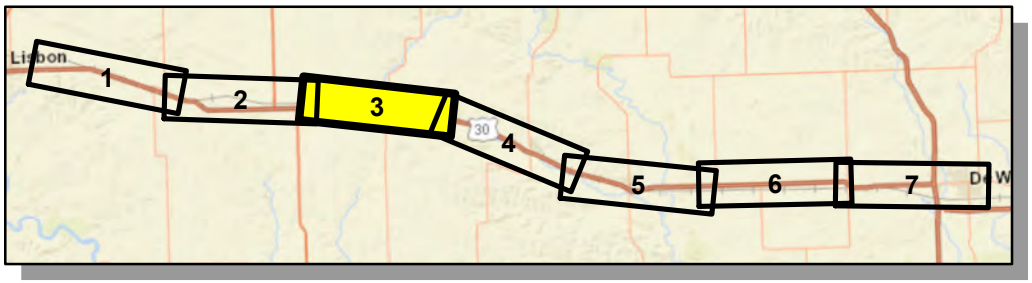

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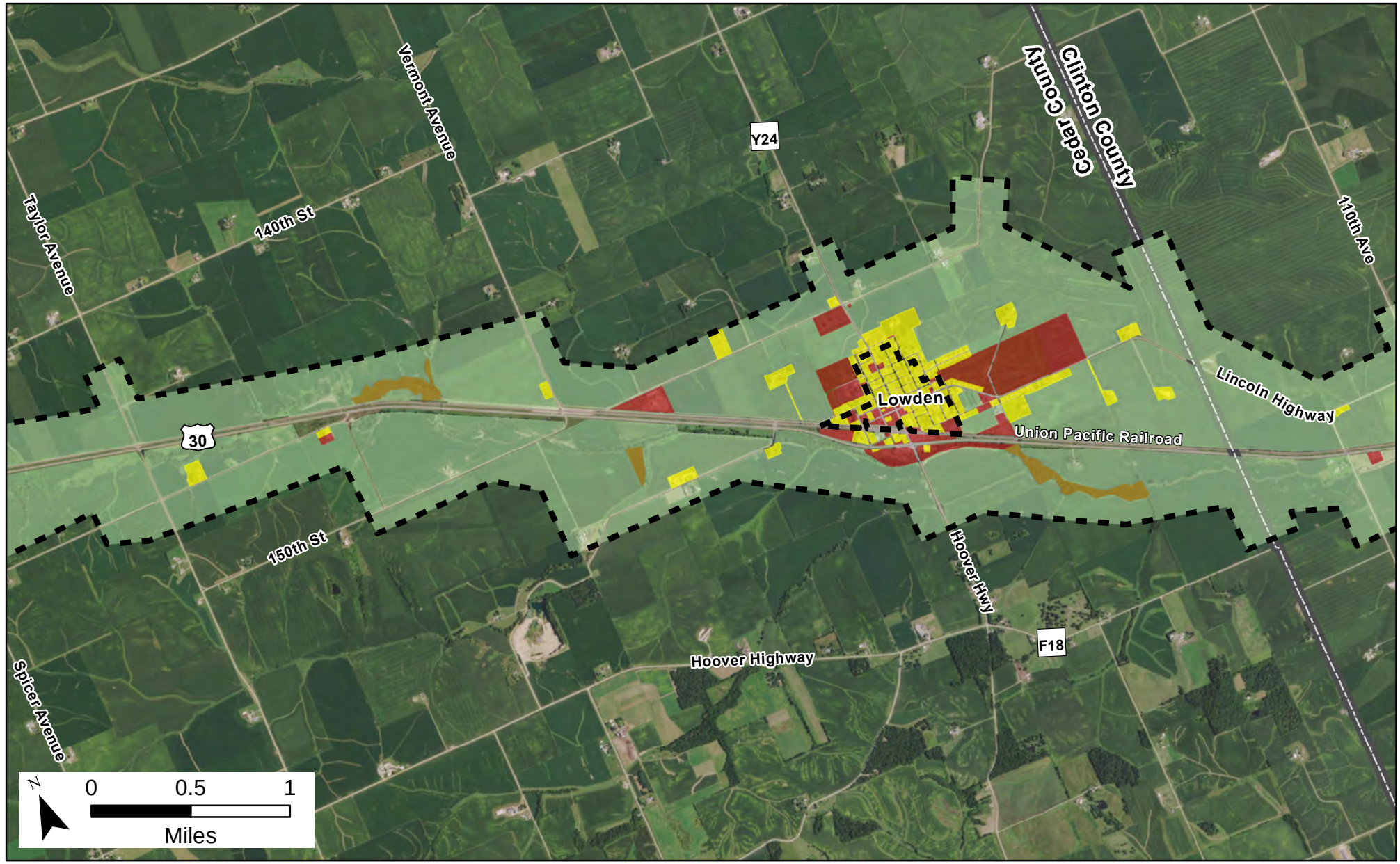

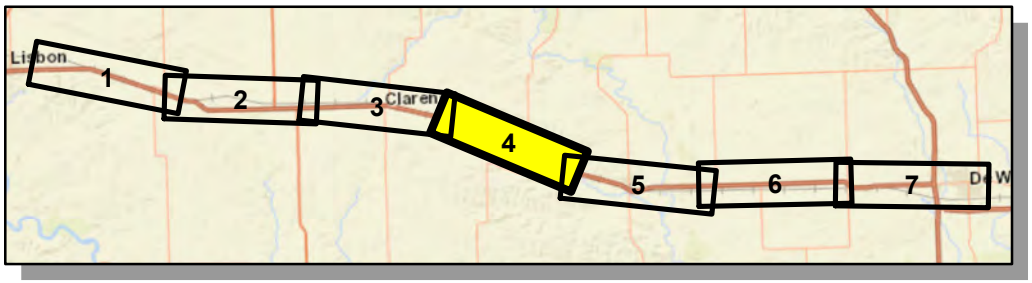

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US 30 Preliminary and Environmental Linkages Study

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IOWA DOT
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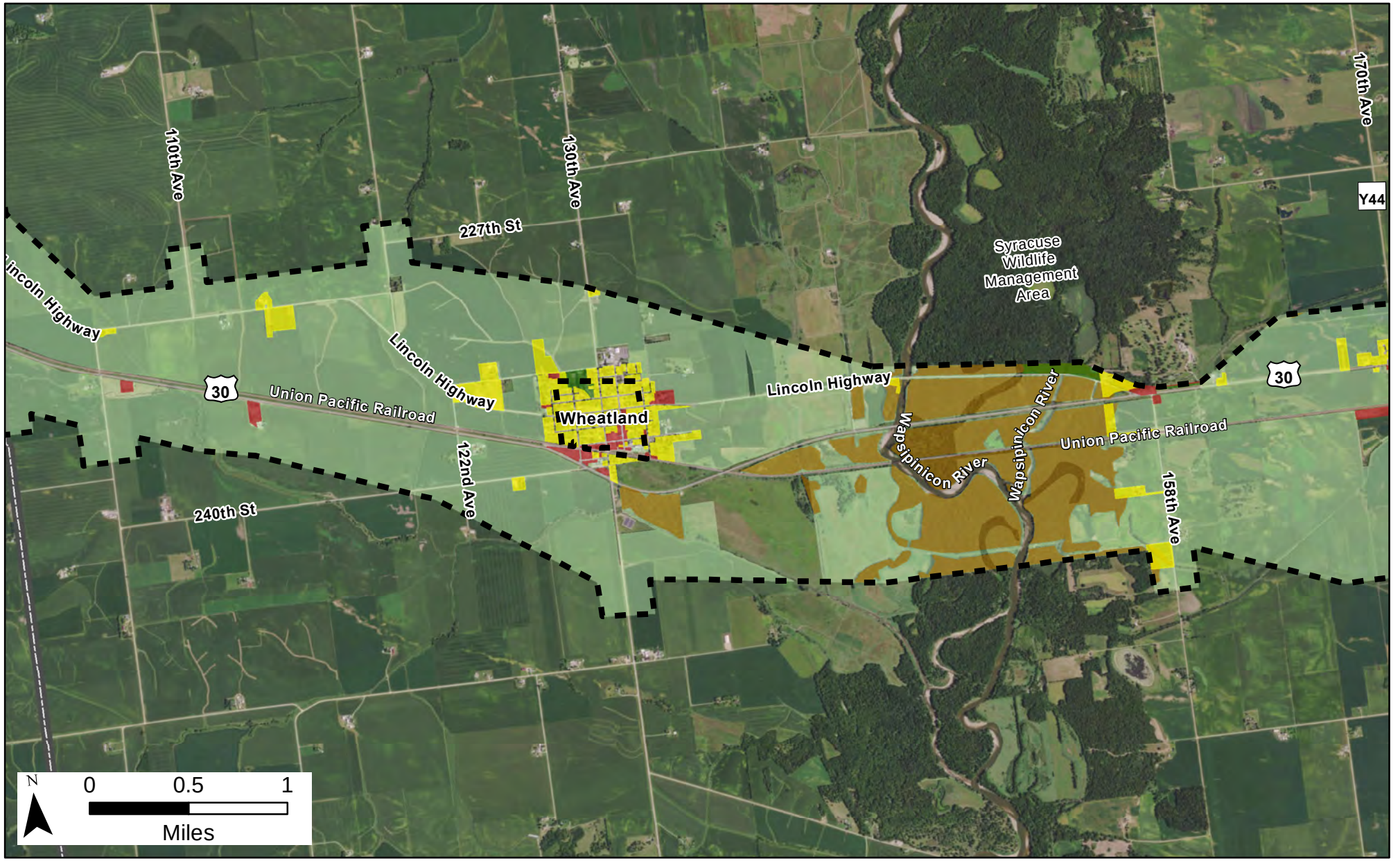
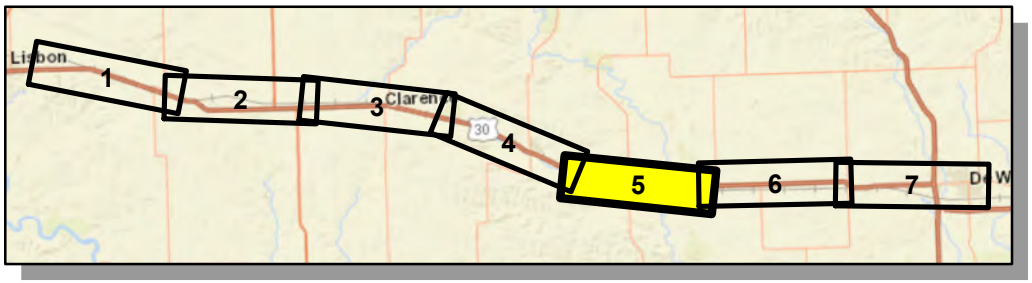




Study Area
Residential
Commercial
Agriculture
Recreational Areas
Woodlands

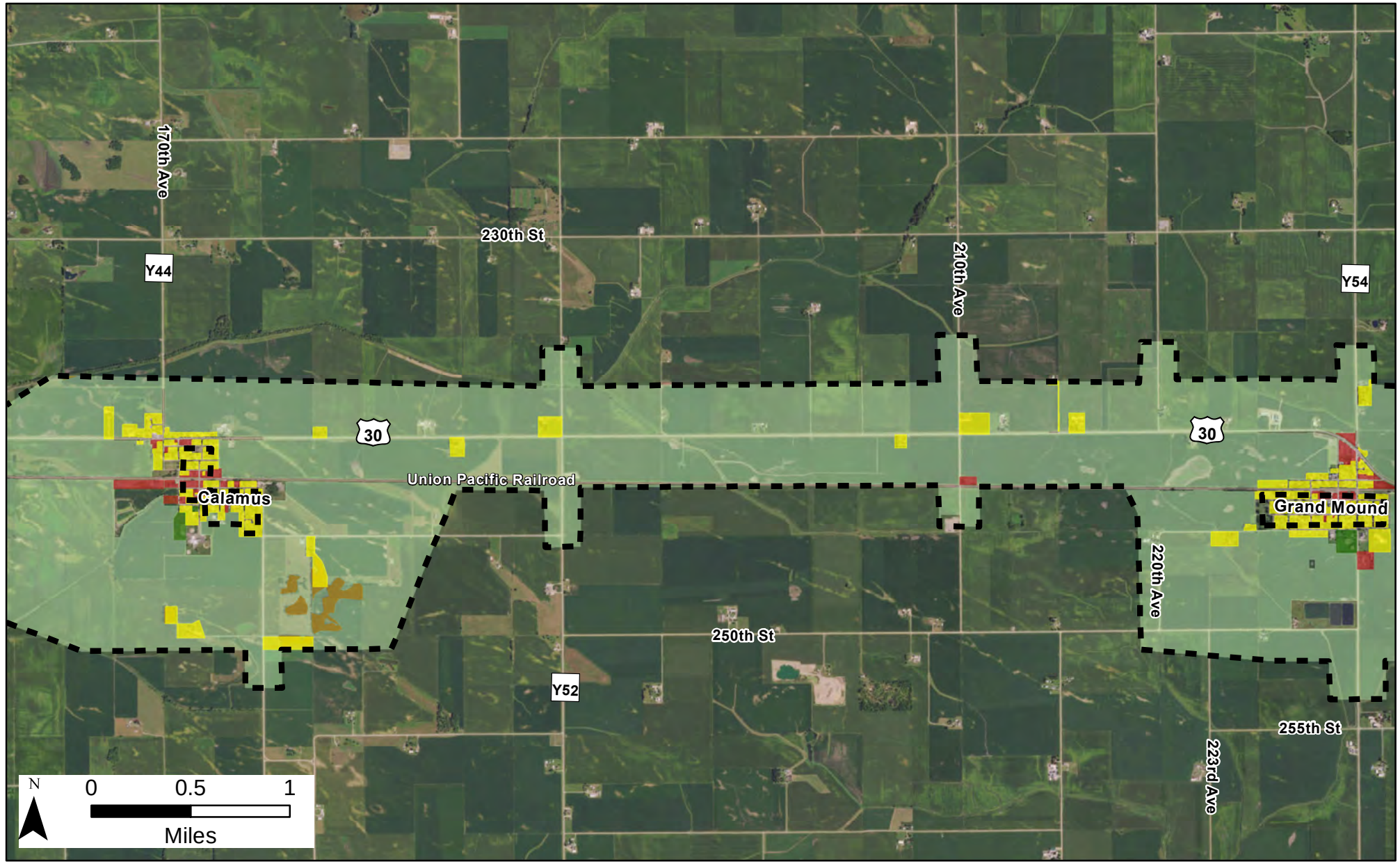
EXISTING LAND USE

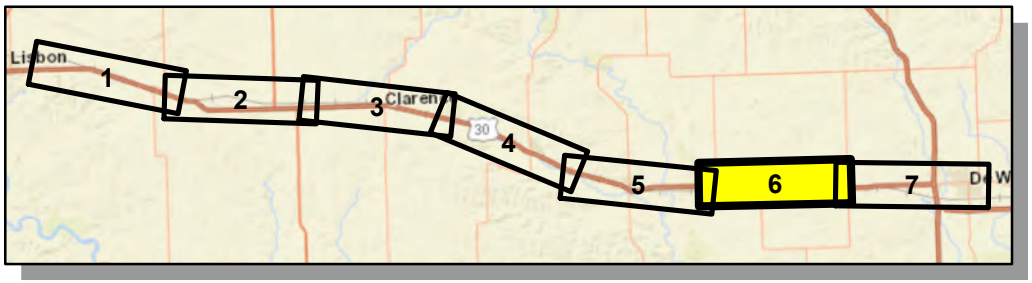
US 30 Preliminary and Environmental Linkages Study

Imagery Source: Esri ArcGIS Online World Imagery
Data Source: Iowa DOT

JACOBS

IOWA DOT
SMARTER | SIMPLER | CUSTOMER DRIVEN





Study Area
Residential
Commercial
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EXISTING LAND USE

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JACOBS

IOWA DOT
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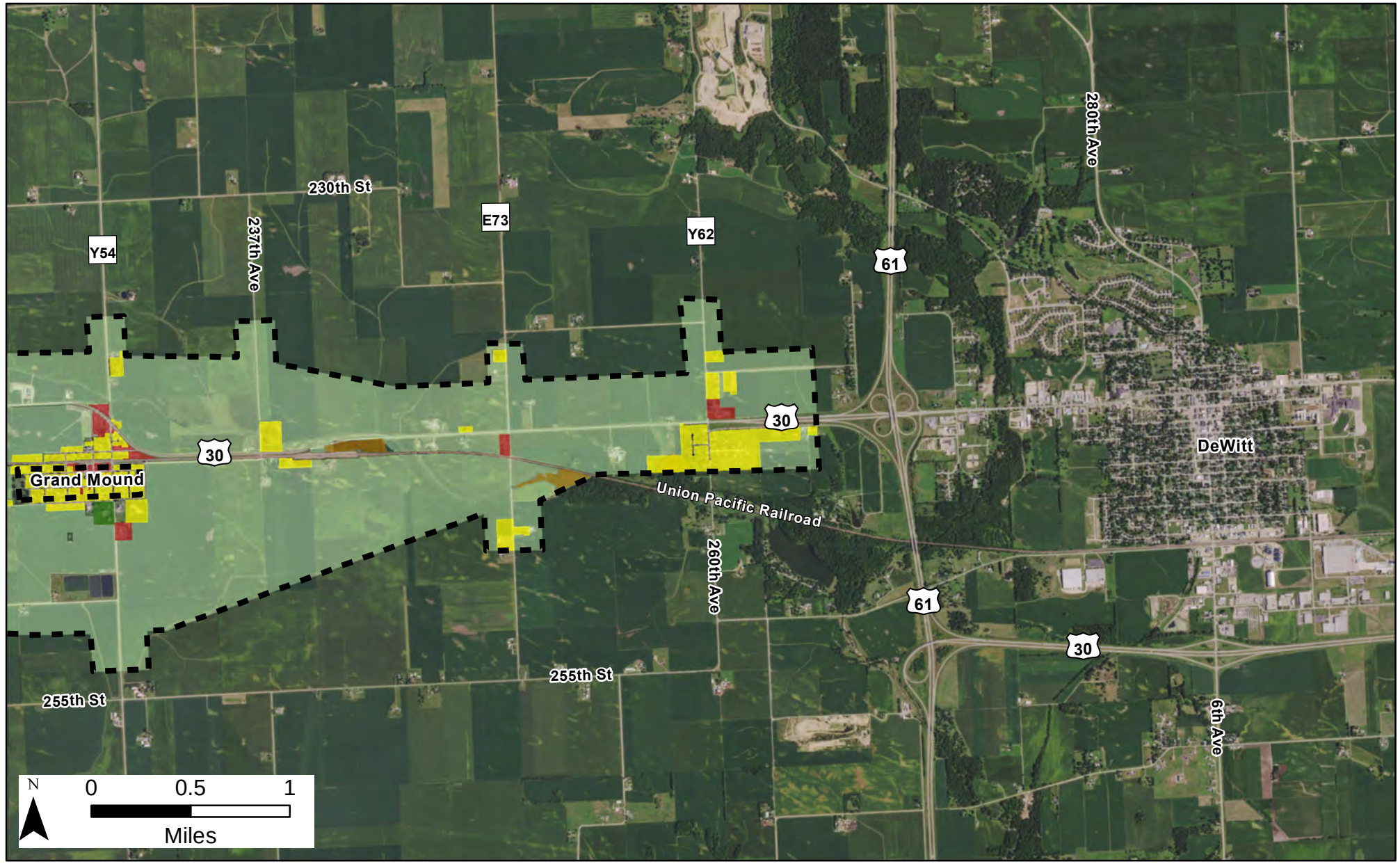

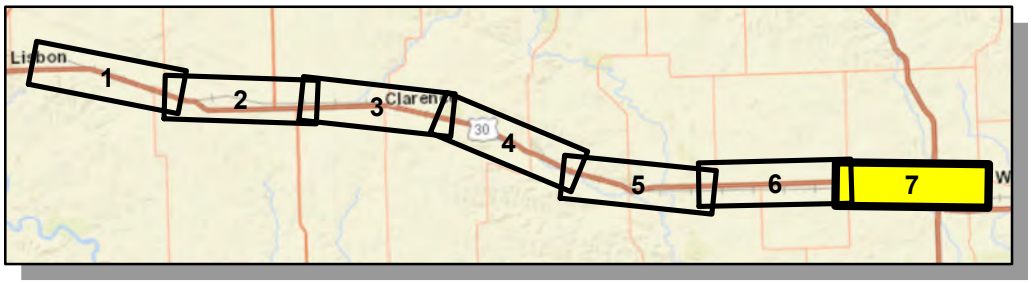

Study Area
Residential
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EXISTING LAND USE

US 30 Preliminary and Environmental Linkages Study

Imagery Source: Esri ArcGIS Online World Imagery
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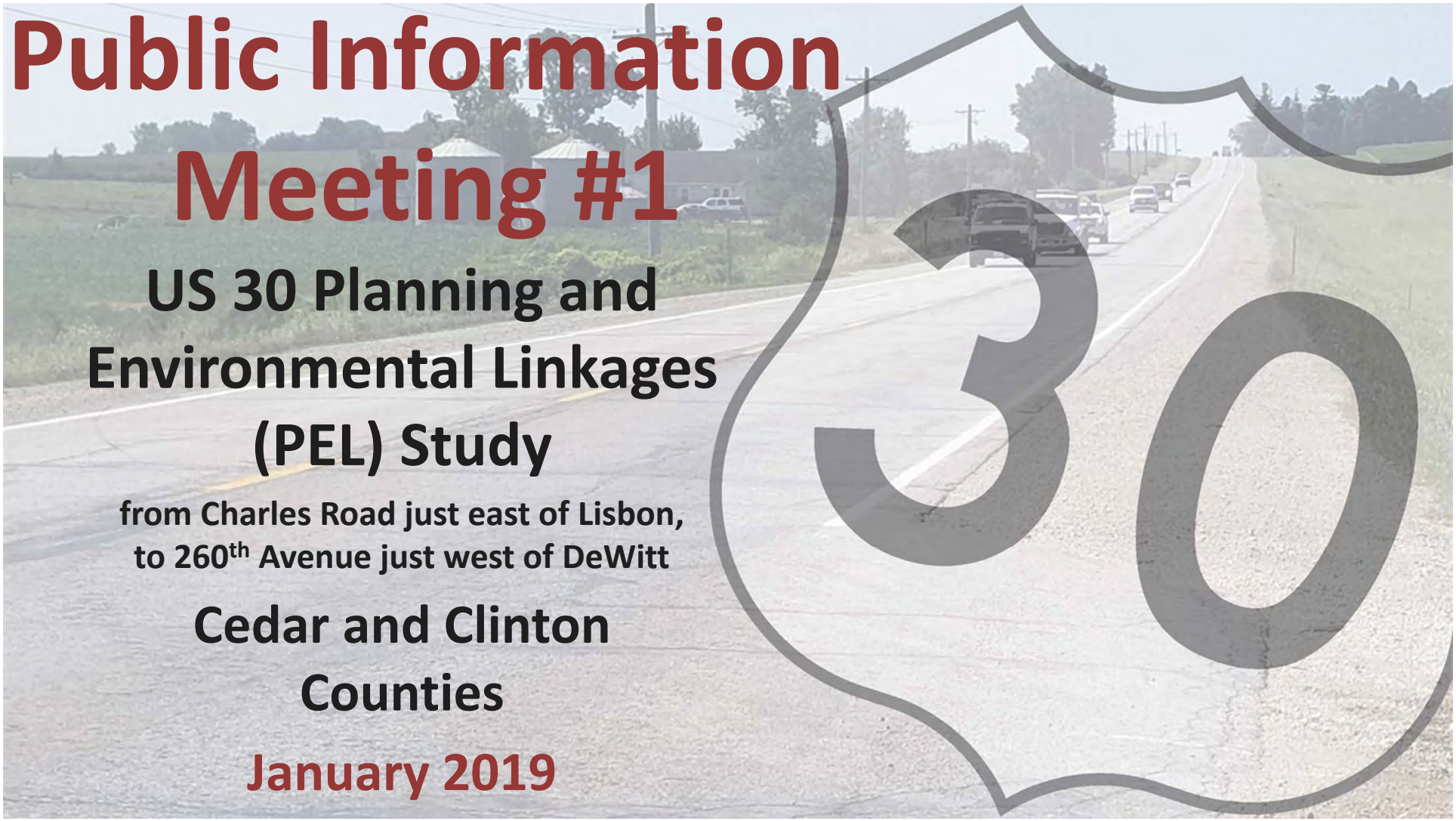
JACOBS

IOWA DOT
SMARTER | SIMPLER | CUSTOMER DRIVEN

APPENDIX C
PUBLIC INFORMATION MEETING #1 PRESENTATION



Public Information Meeting #1

US 30 Planning and Environmental Linkages (PEL) Study

from Charles Road just east of Lisbon, to 260th Avenue just west of DeWitt

Cedar and Clinton Counties

January 2019

Purpose of This Meeting

- Provide study background
- Share study goals and objectives
- Present early study findings
- Seek your input and provide opportunity for questions

US 30 PEL Study – Goals & Objectives

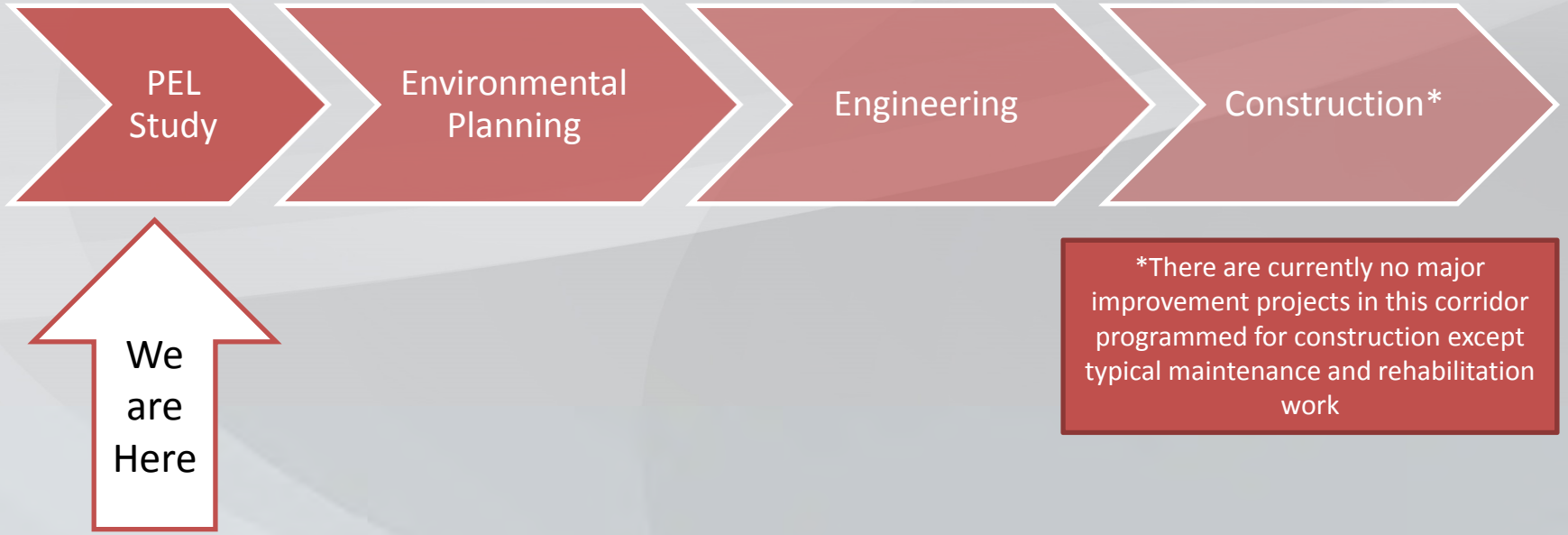
Goals of the US 30 PEL Study

- Identify the number of travel lanes needed and develop a range of possible US 30 improvements that align with future corridor needs
- Provide recommendations on whether bypasses should be used
- Prioritize needs and possible improvement projects

Objectives

- Encourage public involvement and stakeholder input throughout the process
- Evaluate safety, mobility and infrastructure conditions
- Establish a vision for the US 30 corridor

Project Development Process



PEL Study Steps

May 2018 – January 2019 → February 2019 – April 2019 → May 2019 – August 2019

Public Involvement

STEP 1
- Agency Coordination
- Data Collection
- Analyze Existing Conditions and Constraints
- Crash Analysis
- Historical Survey

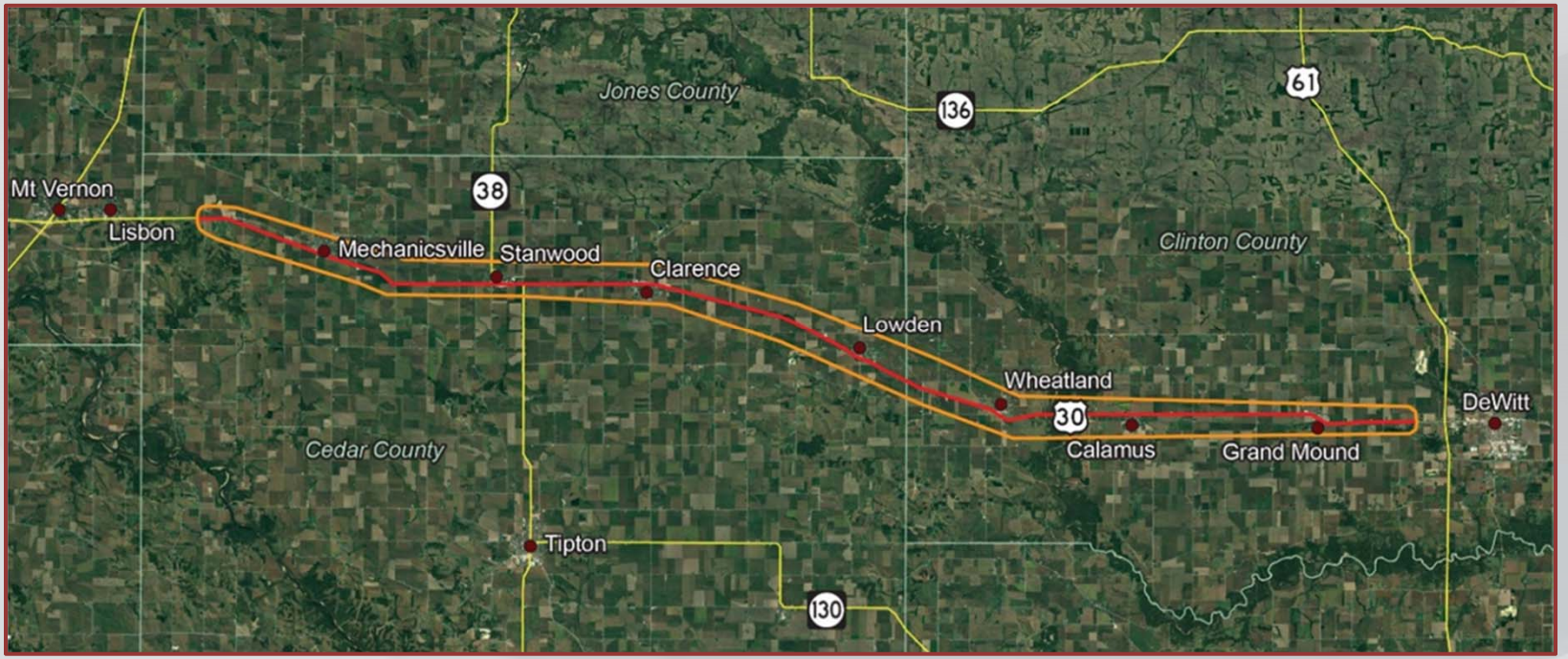
STEP 2
- Vision and Goals
- Geometric Analysis
- Environmental Analyses
- Traffic Study
- Improvement Development and Refinement

STEP 3
- Identify & prioritize recommended Improvements
- Present findings in ***Vision Document***

As funding allows, the next step after the PEL study will be the initiation of the environmental process, which includes more public involvement opportunities

US 30 PEL Study Area

Early planning level study of US 30 between Lisbon and DeWitt



Existing US Route 30

- Originally part of the Lincoln Highway, the first transcontinental highway in the United States; spanning 14 states
- The first Iowa Heritage Byway
- Major east-west route on the Iowa Primary Highway System and Commercial and Industrial Network
- Some sections of US 30 have been upgraded to a four-lane expressway to meet the needs of increasing traffic at those specific locations.

Stakeholder Involvement

Public Involvement Plan (PIP), October 2018

- Tools and strategies proposed for public involvement and agency coordination
- Identifies stakeholders and how information will be shared with them

Small Group Meetings – Held in Summer 2018

- Held with representatives of each of the communities/counties in the study area, local planning agencies and the US 30 Coalition of Iowa
- General support for improvements to US 30 to support economic development, accommodate traffic and improve safety

US 30 PEL Study – Existing Conditions

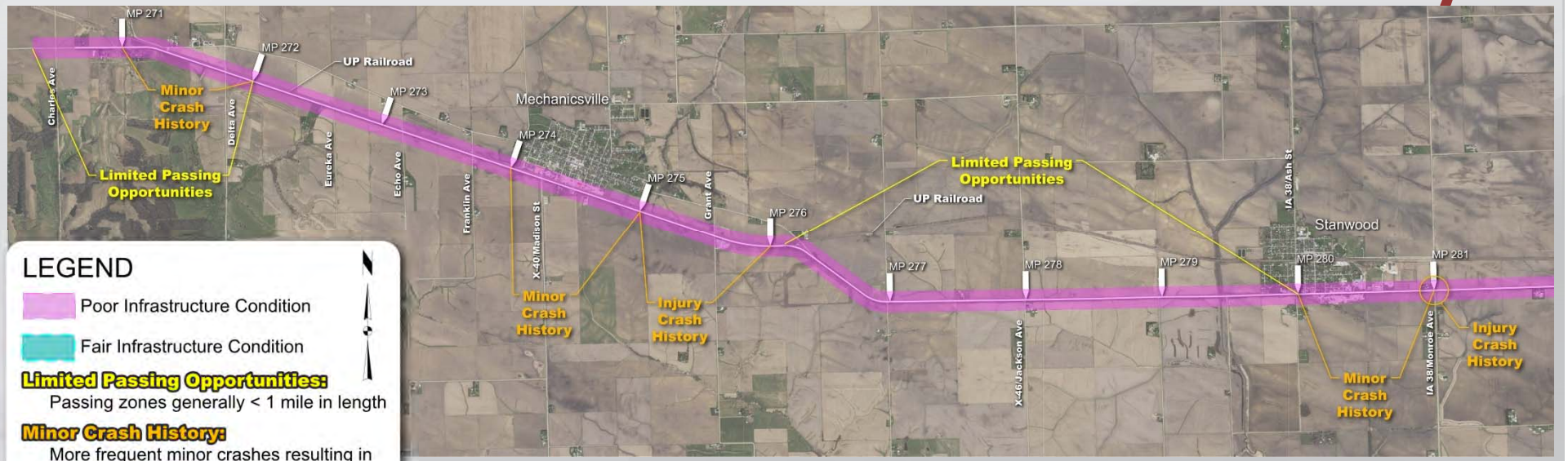
Nearing Completion of Existing Conditions Analysis

- Existing Infrastructure Condition and Features
- Existing Travel Operations and Mobility
- Past Corridor Crash History and Safety Performance

Findings

- Areas of Pavement Deterioration and Aging Bridges
- Overall Reasonable Traffic Flow but Areas With Limited Passing Opportunities
- No Significant Safety Concerns based on Crash History and Existing Roadway Features

Infrastructure Condition and Crash History



LEGEND

Poor Infrastructure Condition

Fair Infrastructure Condition

Limited Passing Opportunities:
Passing zones generally < 1 mile in length

Minor Crash History:
More frequent minor crashes resulting in only property damage

Injury Crash History:
More injury crashes than other comparable Iowa roadways

Crash History:
More total crashes than other comparable Iowa roadways

MP 293
Mile Post

Infrastructure Condition and Crash History

Infrastructure Condition and Crash History

LEGEND

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Fair Infrastructure Condition

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MP 293
Mile Post

Infrastructure Condition and Crash History

LEGEND

Poor Infrastructure Condition

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Crash History:
More total crashes than other comparable Iowa roadways

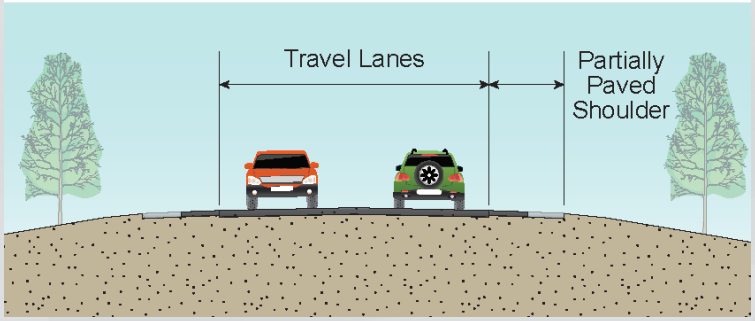
MP 293
Mile Post

US 30 PEL Study – Improvement Alternatives

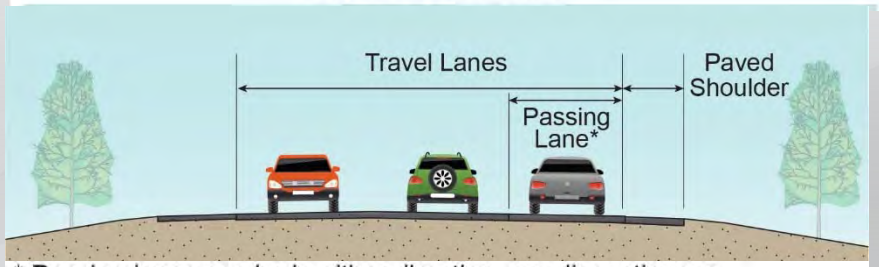
- Forecast Traffic Levels
- Number and Types of Lanes Necessary to Meet Future Demands
- Possible Roadway Improvements and Bypasses

Possible Roadway Options for Rural Areas

2-Lane Rural

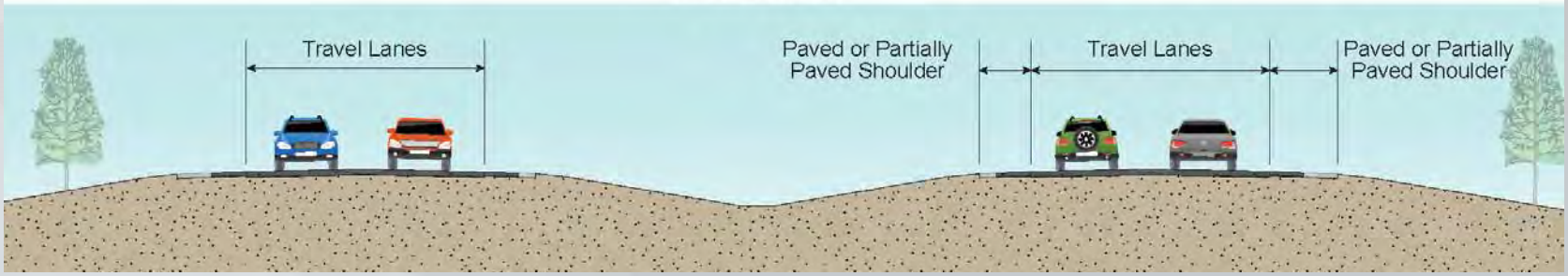


Super 2-Lane Rural



* Passing lanes can be in either direction, are discontinuous, and spaced at established intervals along a corridor.

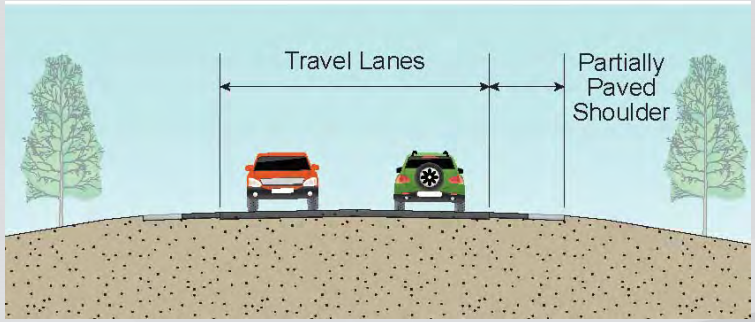
4-Lane Rural



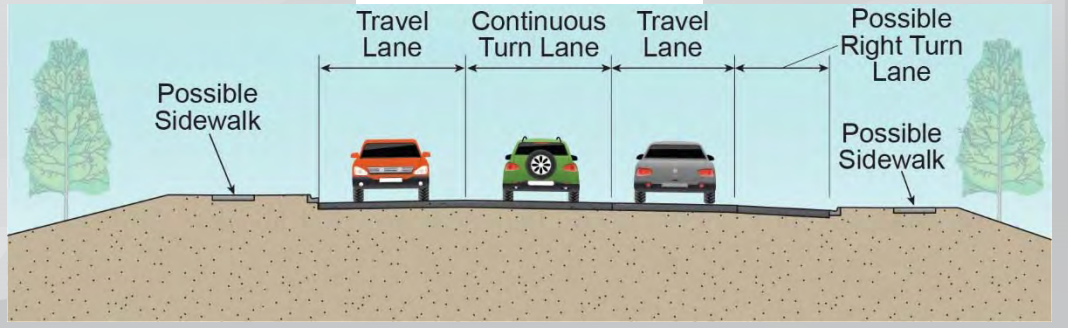
Note: Drawings are not to scale

Possible Roadway Options for Urban Areas

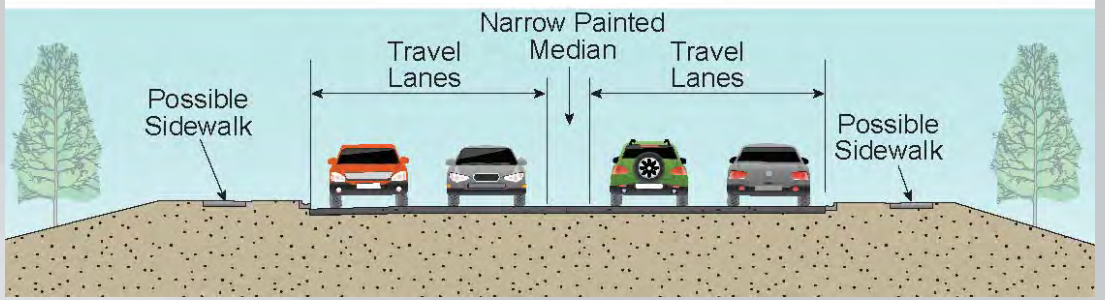
2-Lane Urban



Super 2-Lane Urban



4-Lane Urban

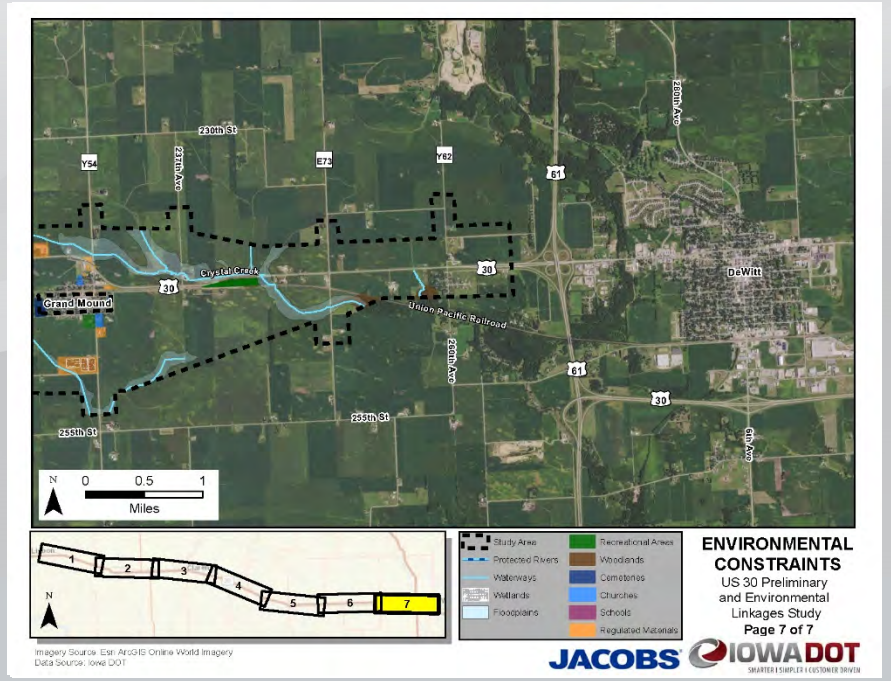


Note: Drawings are not to scale

Constraints in Study Area

Study includes an evaluation of possible environmental and community constraints within the corridor, which could include:

- Wetlands
- Floodplains
- Historical/Archeological Features
- Right-of-way (ROW)
- Cemeteries
- Parks and Recreational Facilities
- Waterways
- Tribal Lands
- Woodlands
- Animal and Plant Habitat and Presence



Next Steps

- Next Public Information Meetings – Spring & Summer 2019
- Anticipated Study Completion – August 2019
- PEL Study findings will be incorporated into future studies.

Questions and Comments?

Clinton County
Sam Shea, District Transportation Planner

- 5455 Kirkwood Blvd SW
  Cedar Rapids, IA 52404
- Phone: 319-364-0235
- Fax: 319-364-9614
- E-mail: sam.shea@iowadot.us

Cedar County
Cathy Cutler, District Transportation Planner

- 5455 Kirkwood Blvd SW
  Cedar Rapids, IA 52404
- Phone: 319-364-0235
- Fax: 319-364-9614
- E-mail: catherine.cutler@iowadot.us

Online Comments:
www.bit.ly/US30PEL

APPENDIX D
PUBLIC INVOLVEMENT MEETING #2 HANDOUTS AND DISPLAYS

Welcome to Public Information Meeting #2

- **Please Sign-in**
- **View Short Video**
  - Recap of information from Public Information Meeting #1
  - Video presentation will play on a continuous 2-minute loop
- **Review Exhibits**

MEETING PURPOSE

To present and solicit feedback on…

- potential of various bypass locations
- the future roadway travel lane needs and possible recommendations coming from this study

Project Development Process

PEL Study → Environmental Planning → Engineering → Construction*

We are Here

*There are currently no major improvement projects in this corridor programmed for construction except typical maintenance and rehabilitation work

PEL Study Steps

May 2018 – January 2019 → February 2019 – June 2019 → Summer 2019

Public Involvement

STEP 1

- Agency Coordination
- Data Collection
- Analyze Existing Conditions and Constraints
- Crash Analysis
- Historical Survey

STEP 2

- Vision and Goals
- Geometric Analysis
- Environmental Analyses
- Traffic Study
- Improvement Development and Refinement

STEP 3

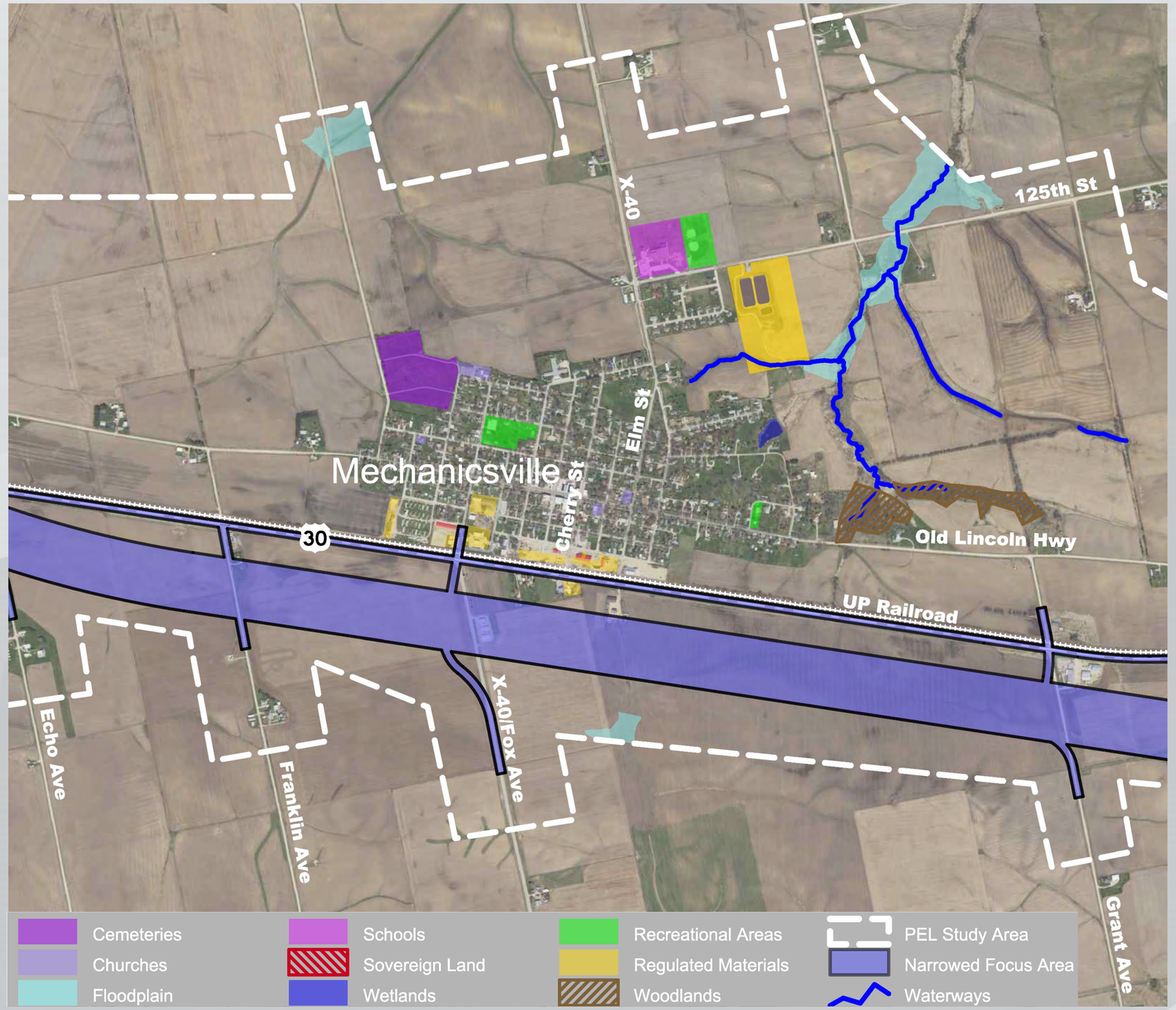
- Identify & prioritize recommended Improvements
- Present findings in ***Vision Document***

As funding allows, the next step after the PEL study will be the initiation of the environmental process, which includes more public involvement opportunities

Mechanicsville

- Existing alignment/widening
  - –Maintains close spacing to UP Railroad
  - –Widening US 30 to the south may result in possible business impacts and possible relocations
  - –Travel patterns through town not affected
- South Bypass
  - –Impacts farm land
  - –Travel patterns through town not affected
- North Bypass
  - –Less desirable due to UP Railroad and existing constraints
  - –Travel patterns through town could be affected

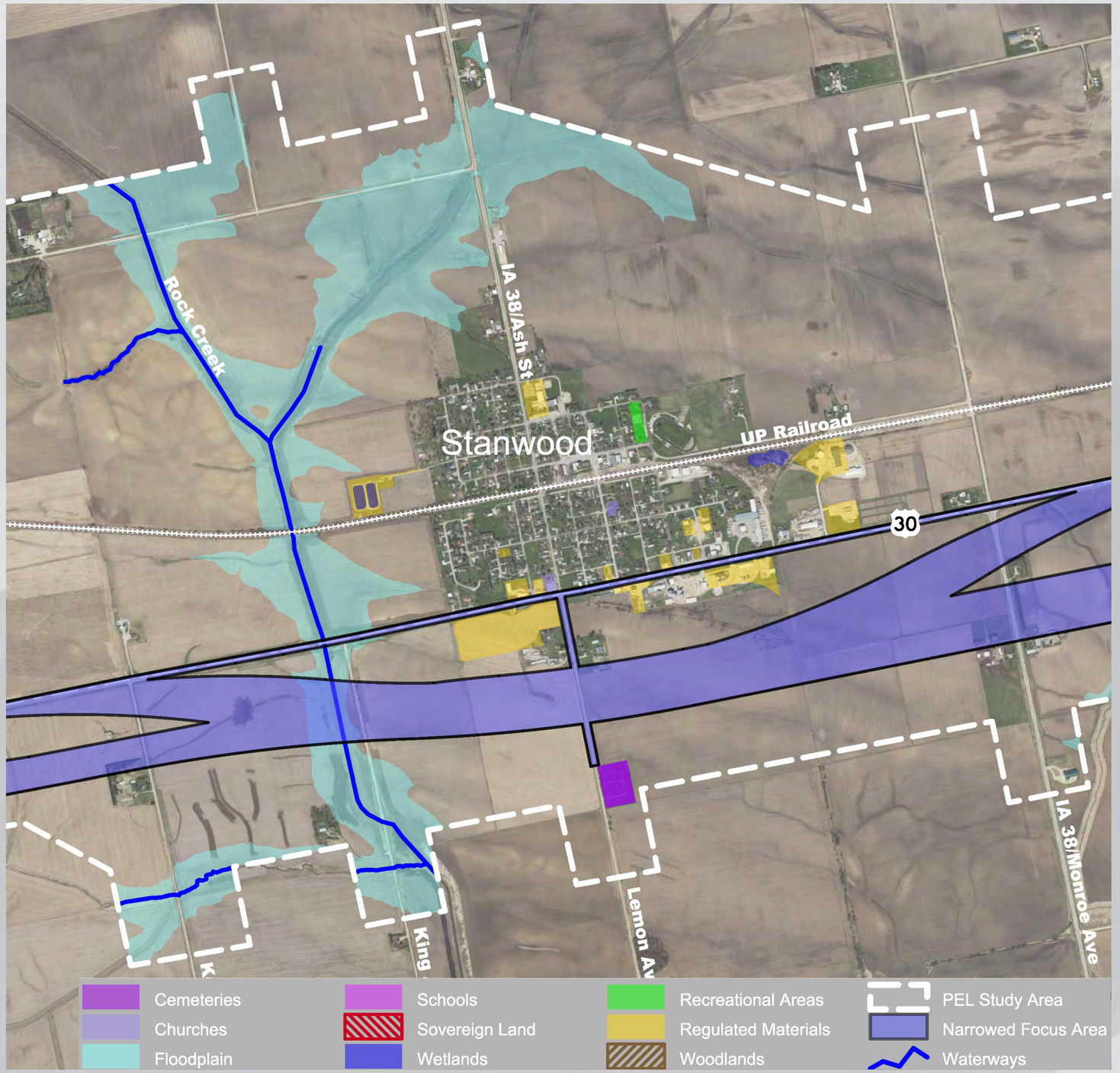
Alternative Development near Mechanicsville is focusing on existing alignment and south bypass options.



Stanwood

- Existing alignment/widening
  - –Property and relocation impacts possible
- South Bypass
  - –Farmland impacted
  - –Local roadway improvements required for access to Stanwood
  - –Travel patterns through town not changed
  - –Truck traffic through town reduced
- North Bypass
  - –Farmland and existing structures impacted
  - –UP Railroad, Rock Creek and other constraints
  - –Travel patterns in town and railroad crossing needs affected

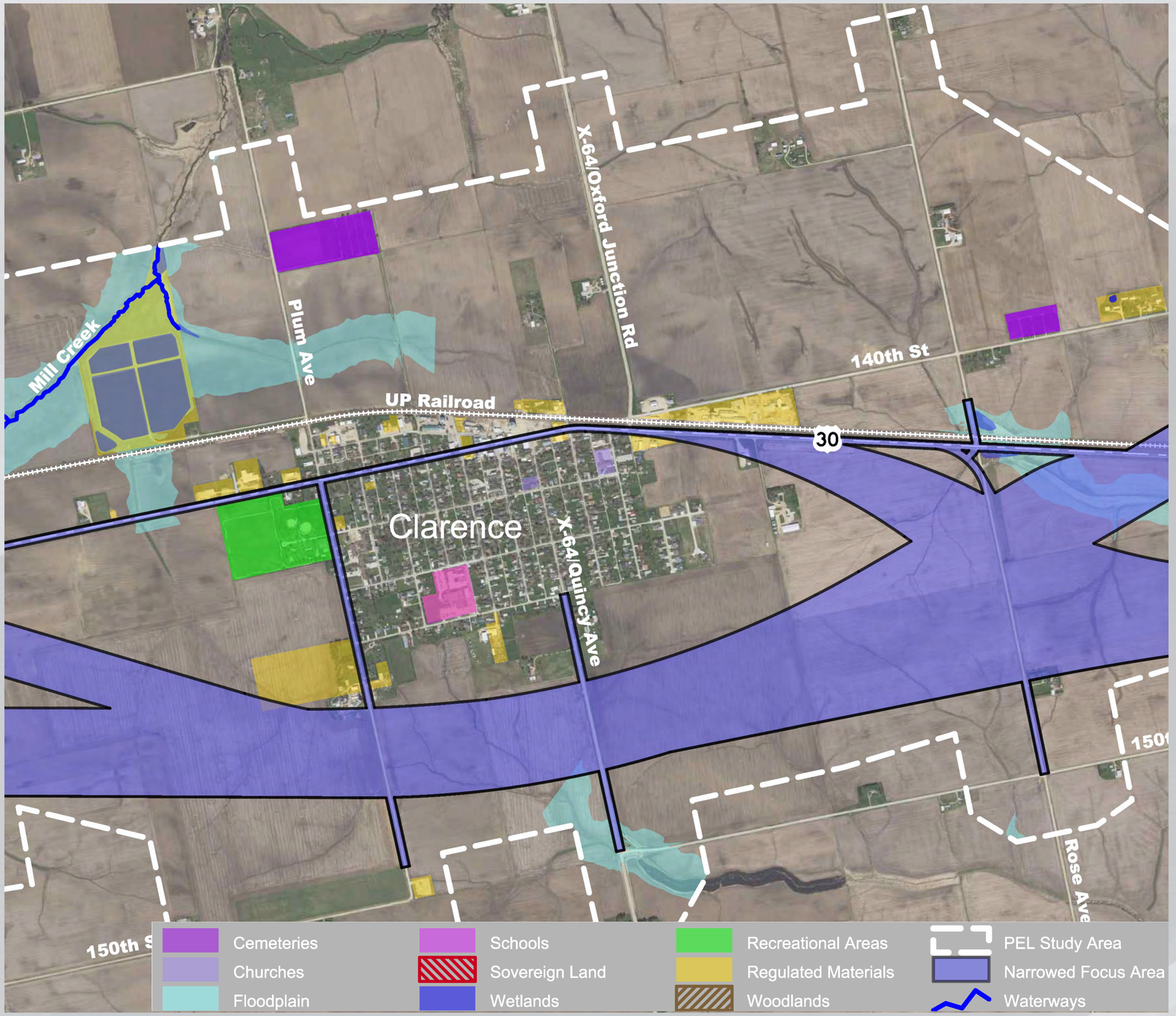
Alternative Development near Stanwood is focusing on existing alignment and south bypass options.



Clarence

- Existing alignment/widening
  - Loss of on-street parking
  - Significant impacts to homes and businesses
- South Bypass
  - Farmland impacted
  - Local roadway improvements required to connect the bypass to Clarence
  - Significant travel pattern changes through town
- North Bypass
  - UP Railroad and other constraints
- Bypasses
  - Limit truck traffic through town
  - Divert through trips from the Clarence business district

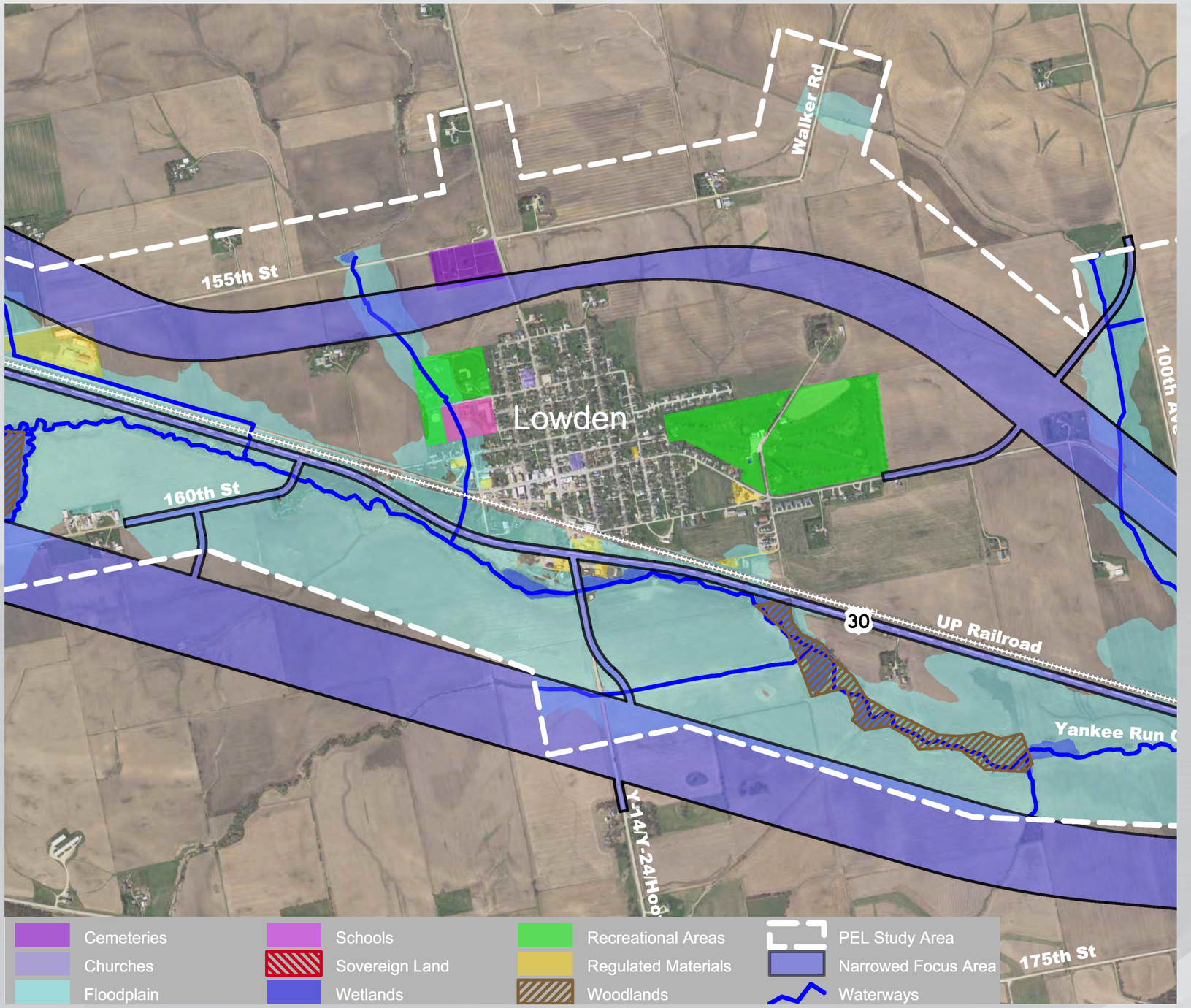
Alternative Development near Clarence is focusing on existing alignment and south bypass options.



Lowden

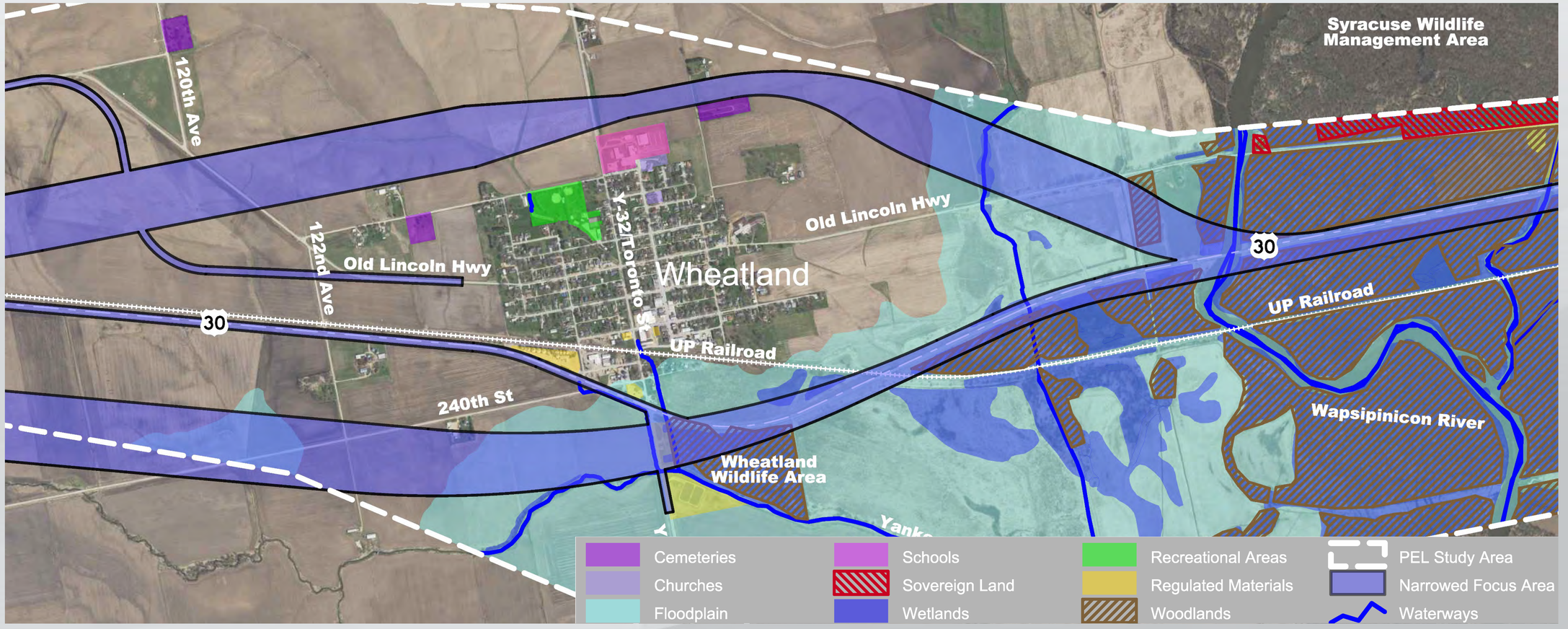
- Existing alignment/widening
  - –Potential business impacts, including relocations
- South Bypass
  - –Farmland impacted
  - –Yankee Run Creek and associated floodplain are considerations
- North Bypass
  - –Minimizes floodplain impacts
  - –Farmland and some residential impacts possible
  - –Travel patterns in Lowden could change
  - –Traffic crossing the UP Railroad would be minimized; requires one or more new grade separated crossings of the UP Railroad
  - –Rolling terrain north of Lowden potentially increases construction costs

Alternative Development near Lowden is focusing on existing alignment and both north and south bypass options.



Wheatland

Alternative Development near Wheatland is focusing on existing alignment and both north and south bypass options.

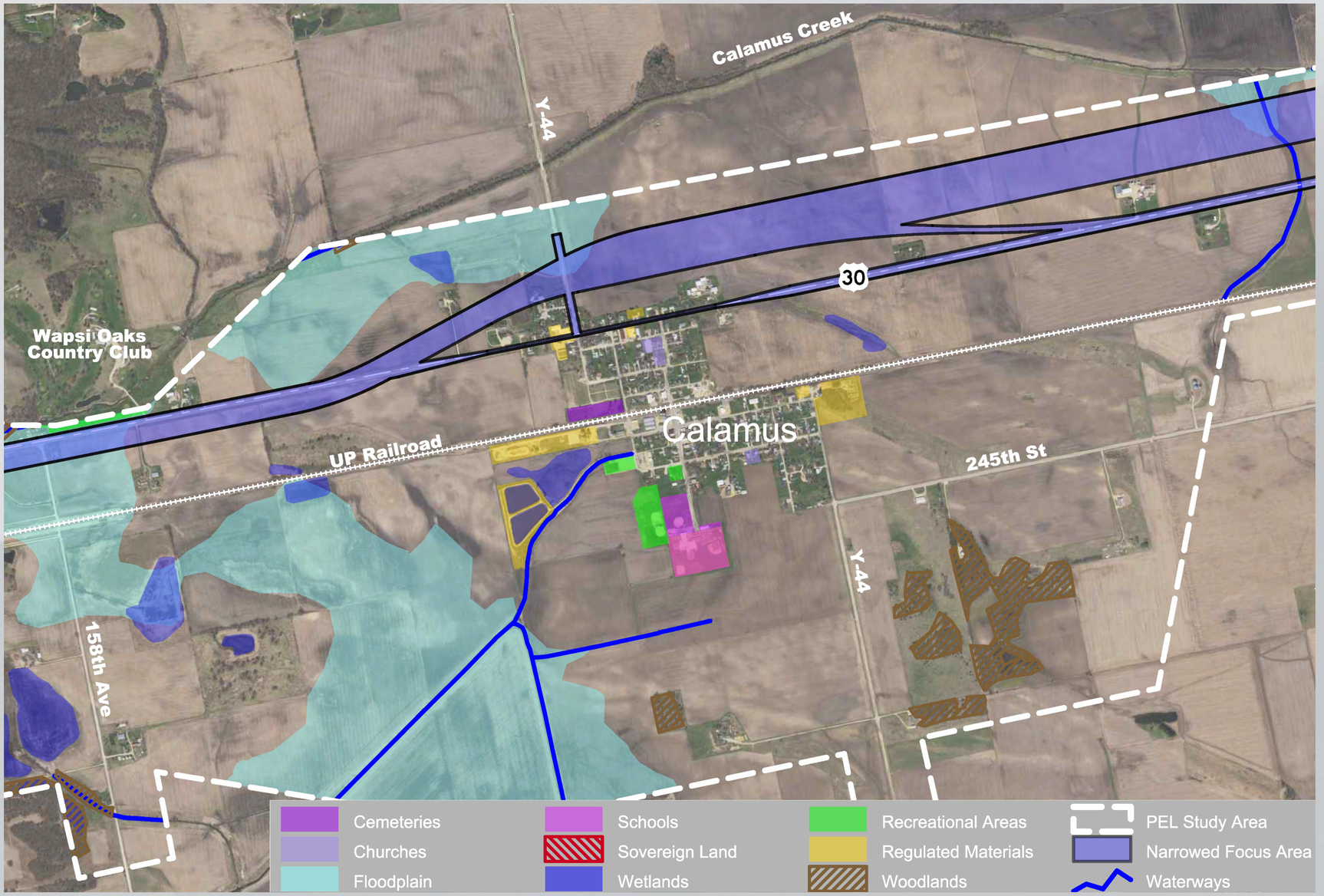


- Existing alignment/widening
  - Potential business impacts, including relocations
- South Bypass
  - Numerous environmental constraints are present south and east of Wheatland
- North Bypass
  - Constrained by sensitive community areas including a school and cemetery
  - Could change travel patterns in Wheatland but would minimize traffic crossing the UP Railroad
  - Requires one or more additional grade separated US 30 crossings of the UP Railroad
  - Minimizes impacts to the numerous environmental constraints south and east of Wheatland
- US 30 alignment needs at Wheatland and at the Wapsipinicon River crossing must be considered jointly

Calamus

- Existing alignment/widening
  - Potential business impacts, including relocations
- South Bypass
  - May require significant local roadway improvements and some changes to travel patterns in Calamus
  - Requires one or more new grade separated crossings of the UP Railroad
- North Bypass
  - Farmland impacted
- Bypasses
  - Numerous constraints are present limiting bypass opportunities

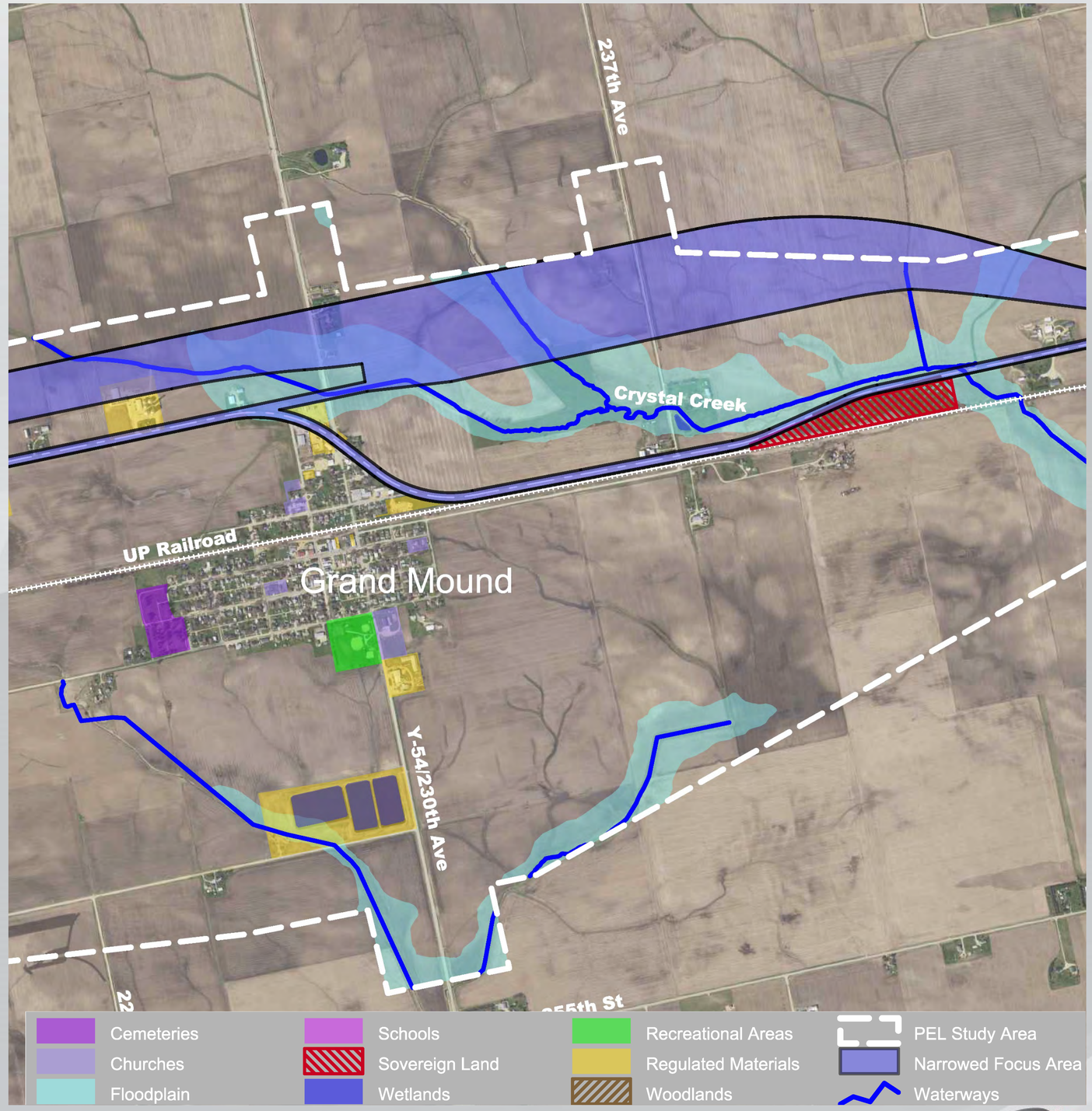
Alternative Development near Calamus is focusing on existing alignment and north bypass options.



Grand Mound

- Existing alignment/widening
  - –Potential business impacts, including relocations
- South Bypass
  - –New grade separated crossing of the UP Railroad west and east of Grand Mound
  - –Travel patterns through town changed
- North Bypass
  - –Farmland and some residences impacted
- Bypasses
  - –Would remove through truck traffic and minimize traffic at identified “problem” intersections
  - –Bypass locations are limited by constraints present both north and south of town

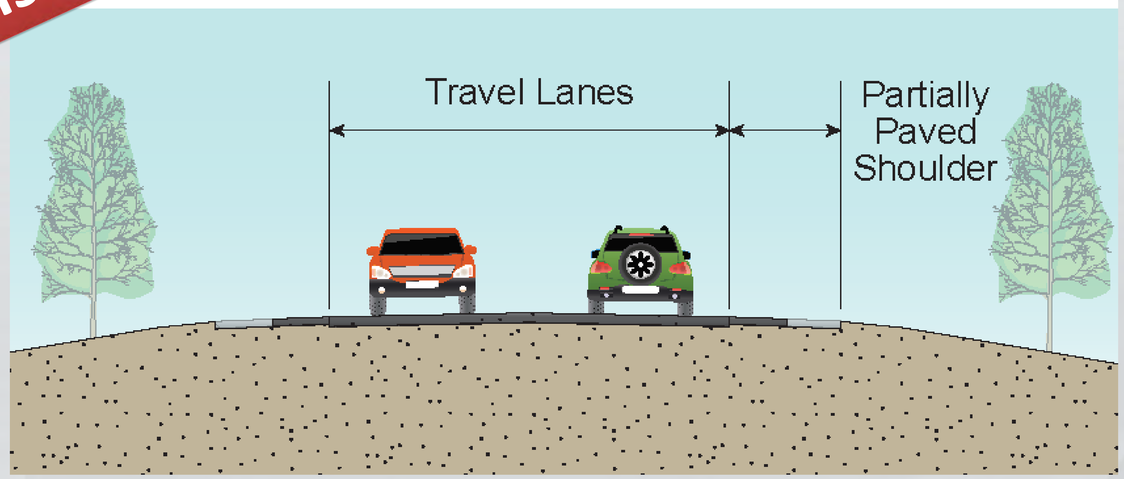
Alternative Development is focusing on existing alignment and north bypass options.



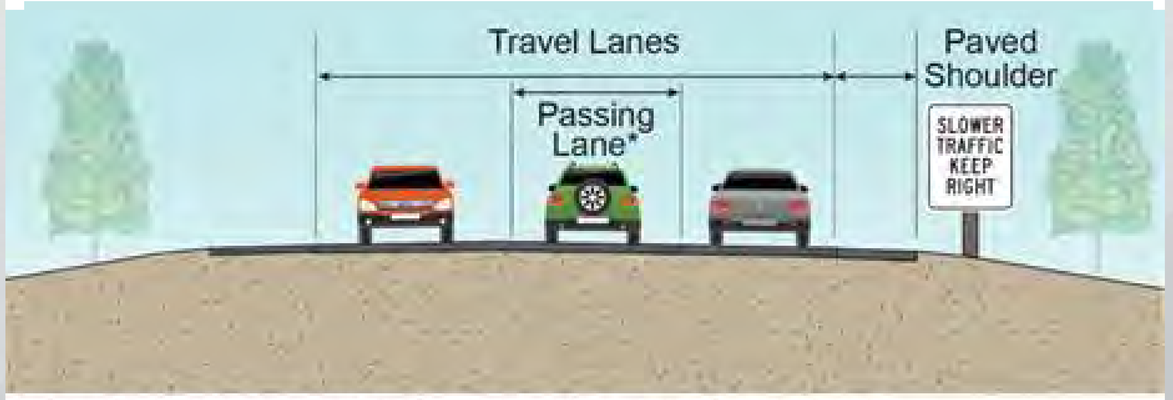
Possible Roadway Options for Rural Areas

Existing

2-Lane Rural

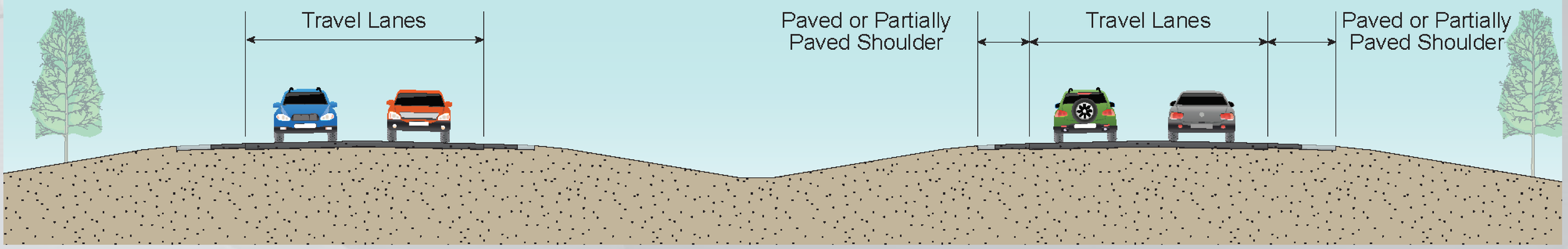


Super 2-Lane Rural



* Passing lanes can be in either direction, are discontinuous, and spaced at established intervals along a corridor.

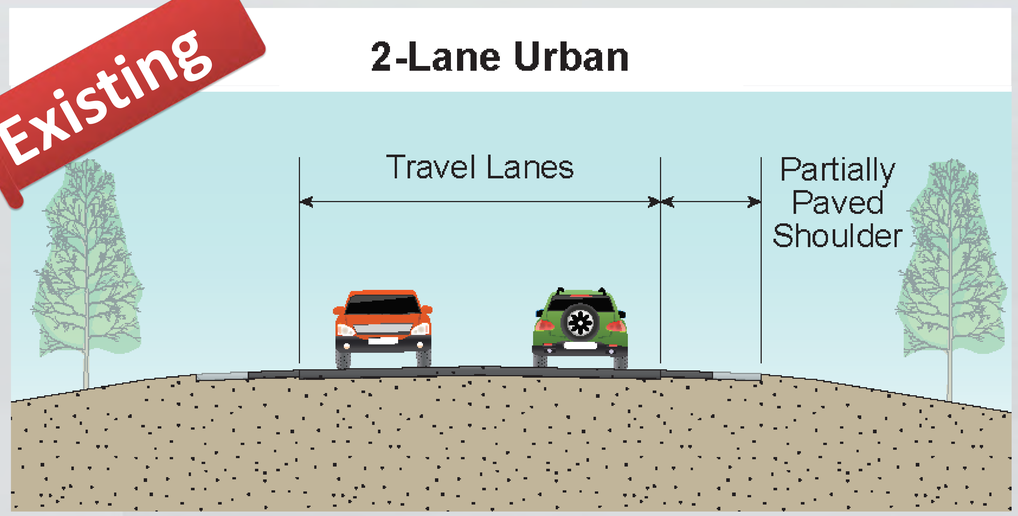
4-Lane Rural

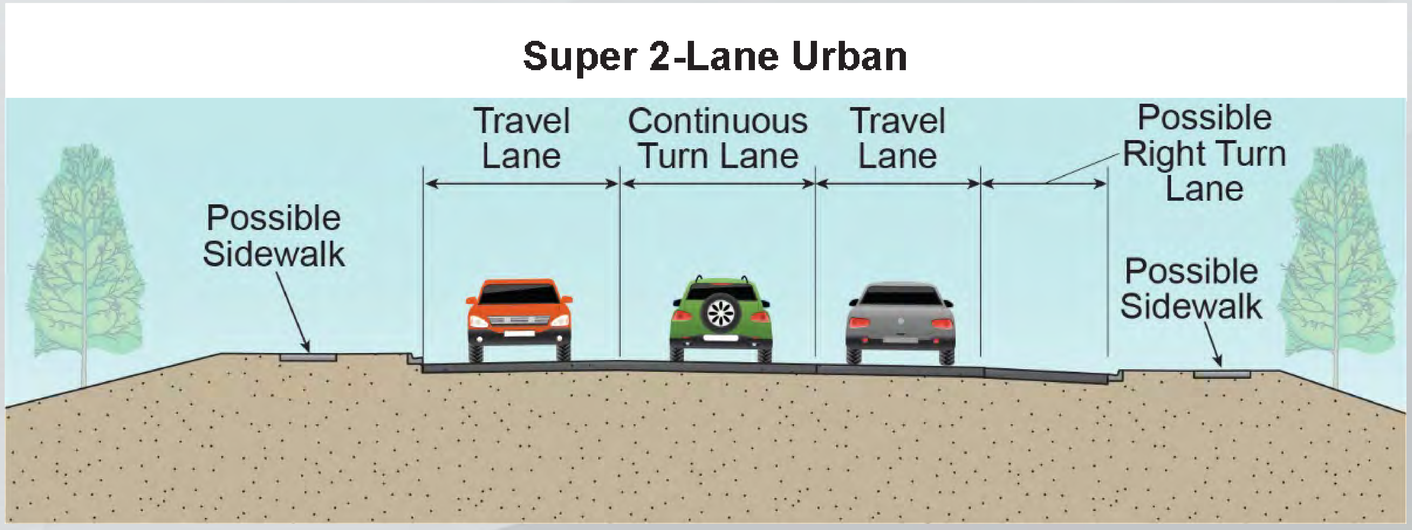


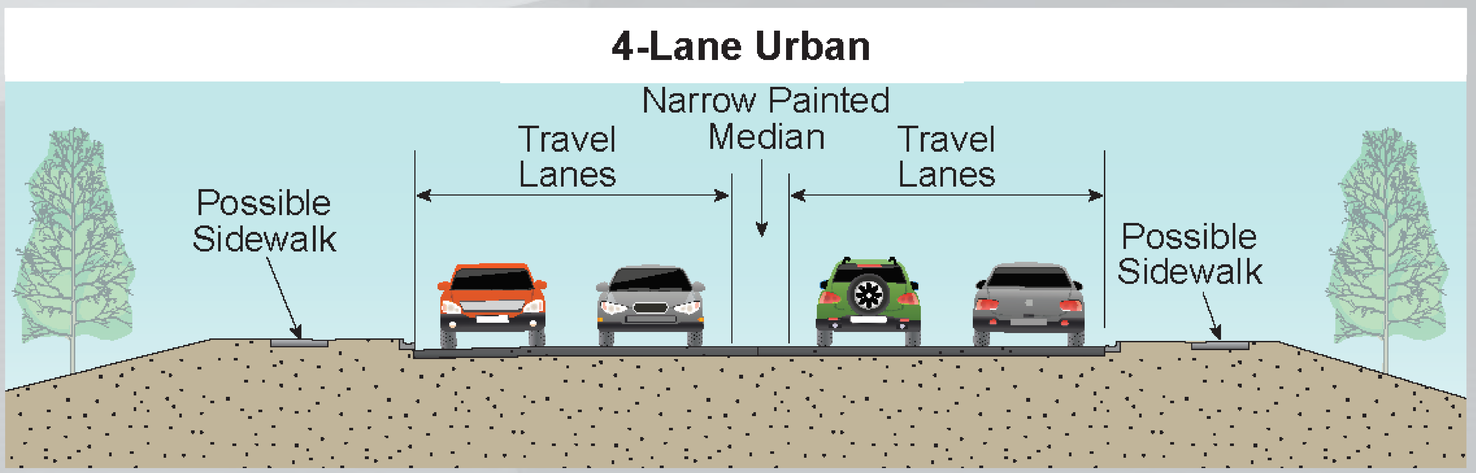
Note: Drawings are not to scale

Possible Roadway Options for Urban Areas

Existing



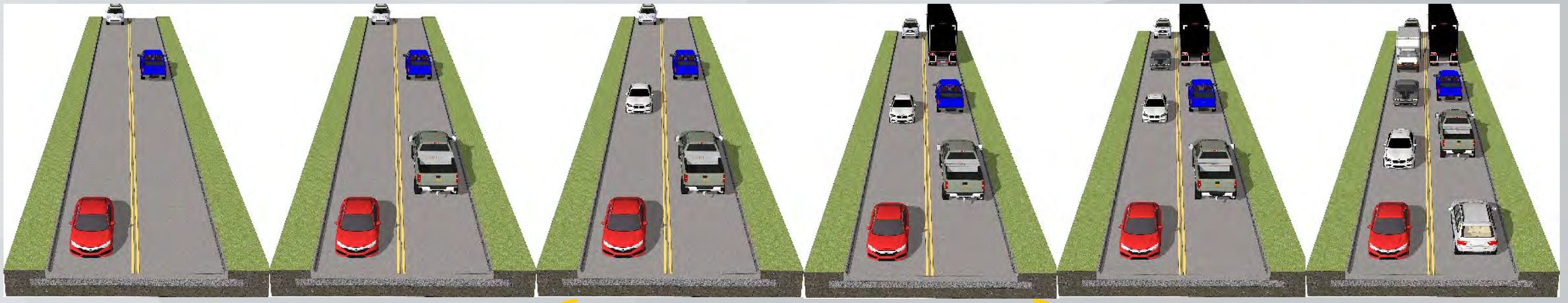


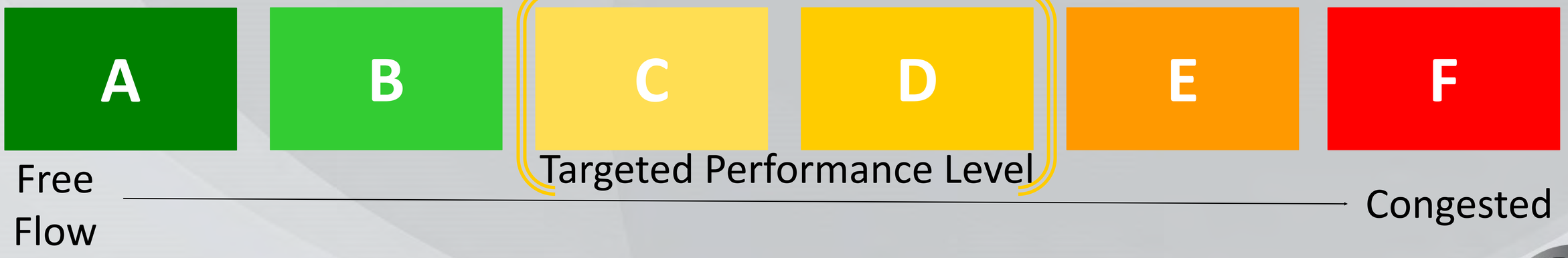


Note: Drawings are not to scale

Traffic Level of Service (LOS)

- LOS is a standard traffic measurement based on vehicle delay and speed, which reflects ease of traffic flow on a scale of A (free flow) to F (congested flow)
- While LOS A and B are nice from a driver's perspective, LOS C and D are typically considered acceptable and are often the performance targets for new construction and major reconstruction projects





US 30 Traffic Volumes & Capacity

Highway capacity is the maximum number of vehicles that can be reasonably expected to travel a roadway segment during a given time period under prevailing conditions.

COMPARISON OF 2045 FORECAST DAILY TRAFFIC VOLUMES

Location		2045 FORECAST DAILY VOLUMES		
		No-Build	Super-2 Highway	Four-Lane Highway
		vpd	vpd	vpd
West of Mechanicsville		7,880	8,250	12,460
Mechanicsville	Stanwood	6,470	6,760	10,200
Stanwood	East Stanwood	7,090	7,420	11,220
East Stanwood	Clarence	5,540	5,790	8,370
Clarence	East Clarence	4,790	5,010	7,200
East Clarence	Lowden	3,780	3,960	6,020
Lowden	Wheatland	3,080	3,220	4,560
Wheatland	Calamus	3,760	3,920	5,660
Calamus	Ground Mound	4,890	5,110	7,730
East of Grand Mound		4,940	5,140	7,790

ESTIMATED DAILY VOLUMES AND LEVEL-OF-SERVICE (LOS)*

Values represent the upper volume range where specified LOS is maintained.

TWO-LANE RURAL HIGHWAY		FOUR-LANE RURAL HIGHWAY
LOS	Approx. Daily Volume (vpd)	Approx. Daily Volume (vpd)
C	8,400	40,300
D	14,300	51,000
E	28,600	57,900

*Estimated traffic volumes for uninterrupted flow highways developed by the Florida DOT (FDOT Quality/Level of Service Handbook, 2012).

vpd = Vehicles Per Day

US 30 Mobility & Reliability

CURRENT SPEED AND TRAVEL TIME DATA FOR FULL STUDY CORRIDOR

West of Mechanicsville to East of Grand Mound

Weekday Time Period	Eastbound Travel		Westbound Travel	
	Speed (mph)	Time (minutes)	Speed (mph)	Time (minutes)
Full Day: 12 AM – 11 PM	54.2	47.5	54.4	47.5
Daytime: 7 AM – 9 PM	54.4	47.4	54.4	47.5
Overnight: 10 PM – 6 AM	54.1	47.7	54.3	47.6
Morning Commute: 7 AM – 9 AM	54.6	47.3	54.6	47.3
Afternoon Commute: 4 PM – 6 PM	54.7	47.2	54.7	47.3

Note – The values above include driving through communities with reduced speed limits. Accounting for the reduced posted speed limit sections, data suggests that current travel speeds are at or above the posted speed limits for the corridor.

Future (2045) Modeled Travel Speed and Time

Compared to Existing Conditions

Alternative	Speed Change (mph)	Travel Time (minutes)
No-Build	-0.2	+0.3
Super-2	+1.7	-0.3

Possible Travel Time Savings With Bypass Alignment

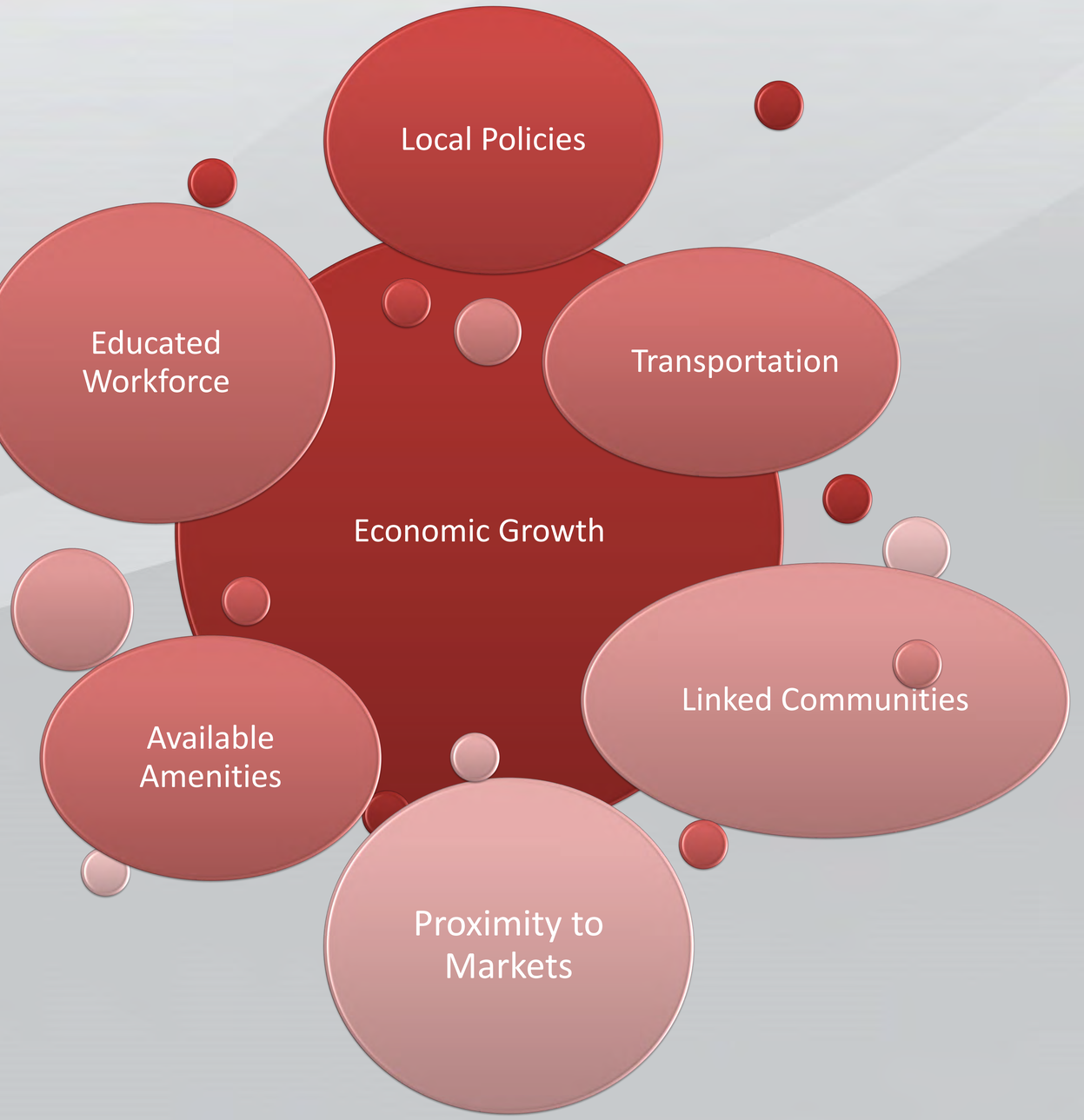
*(All Communities)**

Assumed Posted Speed Limit (mph)	Est. Travel Time Change (minutes)
55	1
60	5
65	8

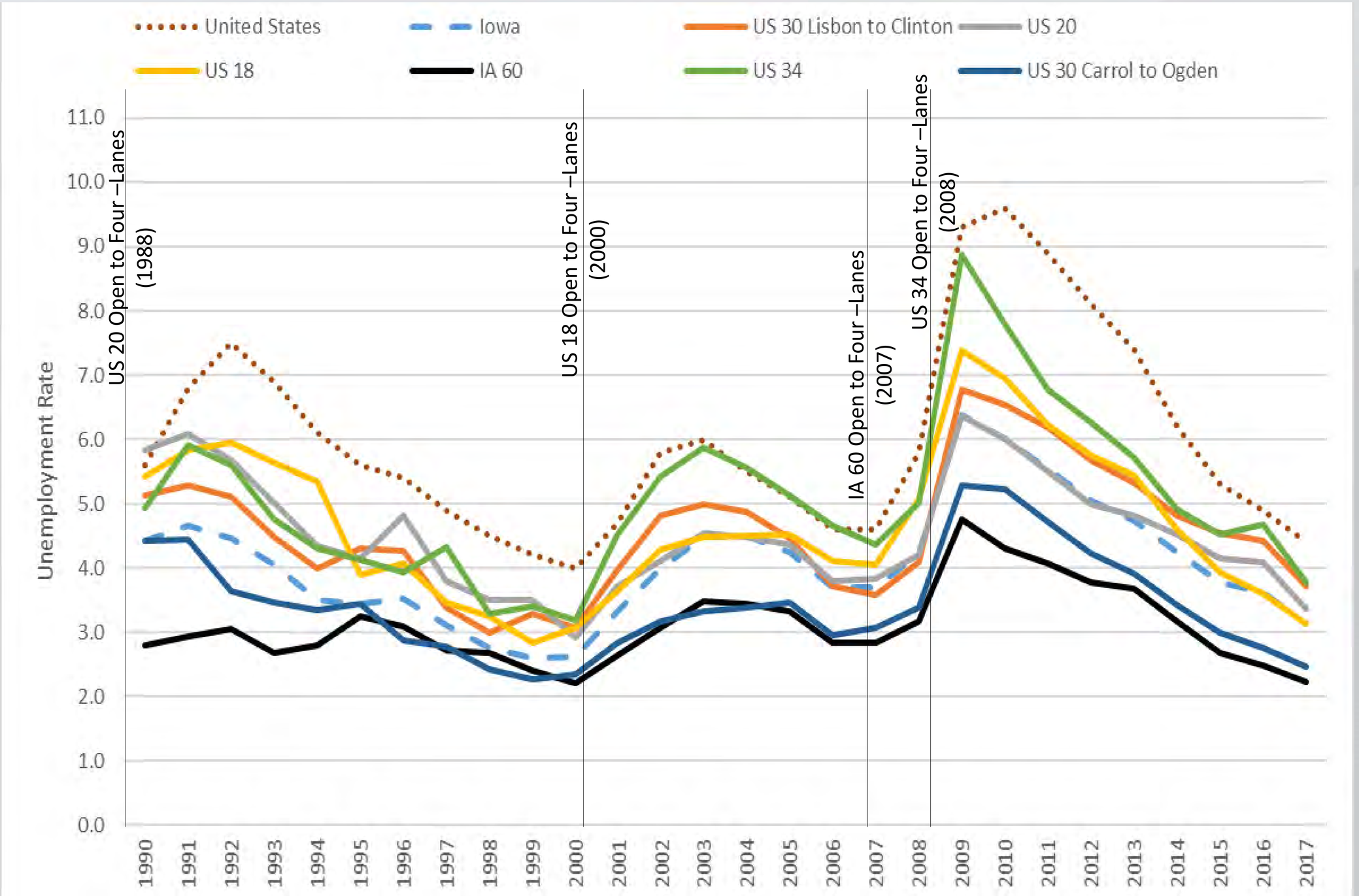
*Based on time required to travel a given distance (estimated 42-mile bypass length) at a constant given speed; times are not necessarily representative of a certain number of travel lanes.

Highway Expansion & Economic Growth

- Considering highway expansion alone, there are no documented direct relationships to economic growth
- Many factors influence economic growth
  - –Educated workforce
  - –Proximity to markets
  - –Links between communities
  - –Available amenities
  - –Local policies
  - –Transportation networks
- Development in rural areas following highway expansion is often displaced from nearby with no overall net growth observed



US 30 & Case Study Corridor Unemployment Trends (1990-2017)



- Local unemployment rates
  - –Trendlines display unemployment statistics in the counties through which they pass
  - –Closely aligned with state and national trends
  - –Showed no correlation to 4-lane improvements

Source: Bureau of Labor Statistics (https://www.bls.gov/cps/ & https://www.bls.gov/lau/)

APPENDIX E
PUBLIC INVOLVEMENT MEETING #3 HANDOUTS AND DISPLAYS

Welcome

- **Please sign-in**
- **Review exhibits**
- **Ask questions**
- **Provide comments**

MEETING PURPOSE

To present and gather feedback on…

- Findings of the US 30 Planning and Environmental Linkages or PEL Study
  - Recommended number of travel lanes
  - No bypasses recommended
  - Potential improvements and prioritization
- Planned next steps for project planning and delivery

PEL Study and the Project Development Process

A Planning and Environmental Linkages - or PEL Study is an early planning level study model, developed and approved by the Federal Highway Administration, that is intended to identify transportation issues and environmental concerns before any construction funding is identified.

PEL Study → Environmental Planning → Engineering → Construction*

We are Here

*There are currently no corridor-wide improvement projects funded

PEL Study Steps

May 2018 – January 2019 → February 2019 – June 2019 → Summer 2019

Public Involvement

STEP 1

- Agency Coordination
- Data Collection
- Analyze Existing Conditions and Constraints
- Crash Analysis
- Historical Survey

STEP 2

- Vision and Goals
- Geometric Analysis
- Environmental Analyses
- Traffic Study
- Improvement Development and Refinement

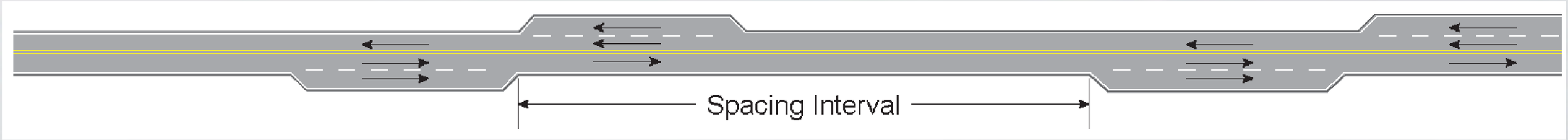
STEP 3

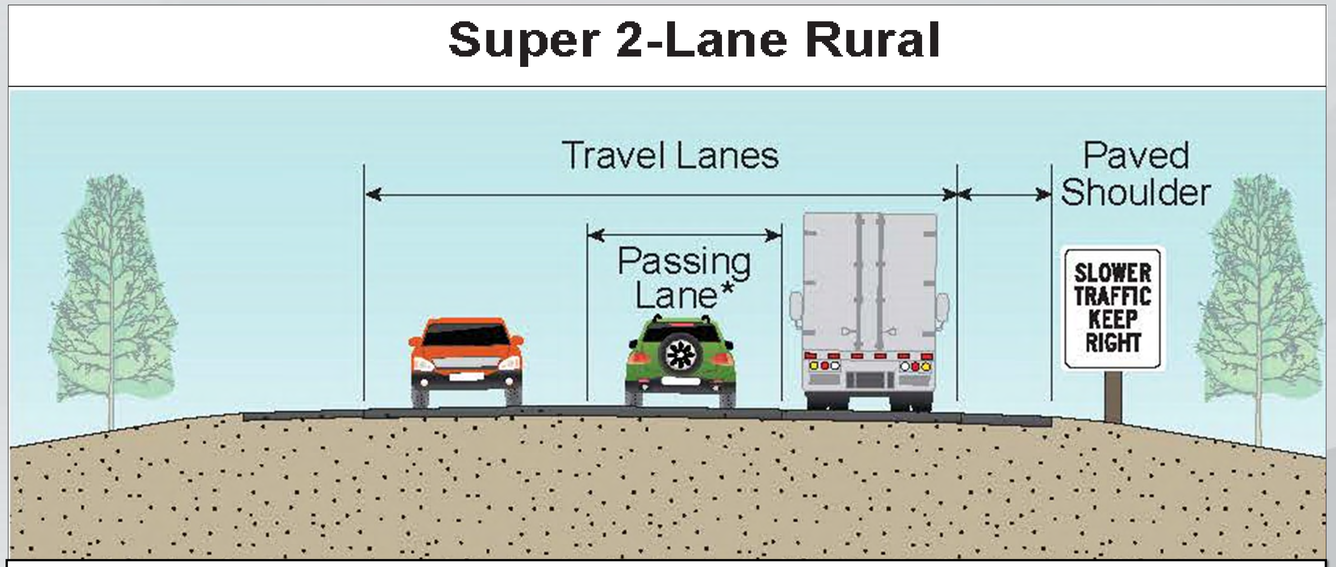
- Identify & prioritize recommended Improvements
- Present findings in ***Vision Document***

We are Here

As funding allows, the next step after the PEL study will be the initiation of the environmental process, which includes more public involvement opportunities

Recommended Roadway Section
Super-2 Highway (Between Communities)



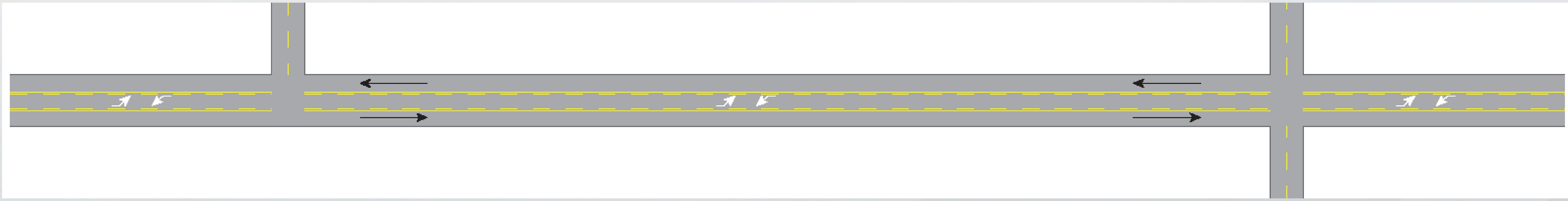


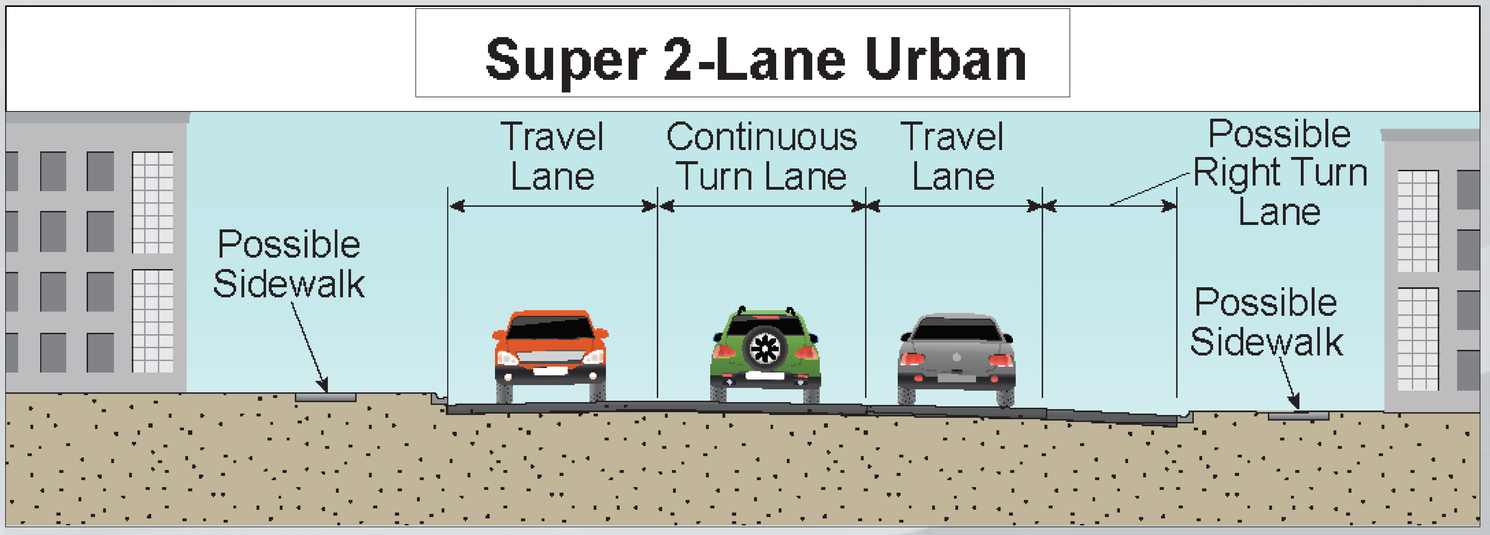
*Passing lanes can be in either direction, are non-continuous, and spaced at established intervals along a corridor.

- Improves opportunity to safely pass slower moving vehicles
- Passing lanes where appropriate and needed, generally every 4 to 5 miles
- Typical passing lane length: 0.5-1.75 miles

U.S. 169 Fort Dodge, IA to Humboldt, IA

Recommended Roadway Section
Super-2 Highway (Through Communities)





- Turn lanes separate turning traffic from US 30 traffic flow
- Reduces travel delays through communities
- Center left turn lane and right turn lanes provided at locations with minimal impact and cost

Example of Center Two-Way Left-Turn Lanes (TWLTL) in Oelwein, Iowa.

Why Improvements are Recommended

- US 30 is a critical roadway to Iowa's rural economy
  - Iowa DOT targeted corridor for mobility and safety improvements (Iowa In Motion 2045 State Transportation Plan)
- Presence of slow-moving farm and agricultural equipment common throughout the year
- Vehicle backups can occur
  - Multiple communities along the corridor
  - Sections with minimal signed/marked passing opportunities
- Public input supports enhancement of the corridor
- Improvement focus
  - Decrease conflicts with slow-moving vehicles and turning vehicles
  - Increase safe passing opportunities to promote safer, reliable and consistent travel

Slow moving trucks and agricultural equipment can be found throughout the US 30 corridor.

Current and Future Conditions
US 30 Travel is Reliable and Consistent

CURRENT SPEED AND TRAVEL TIME

West of Mechanicsville to East of Grand Mound

Weekday Time Period	Eastbound Travel		Westbound Travel	
	Speed (mph)	Time (minutes)	Speed (mph)	Time (minutes)
Full Day: 12 AM – 11 PM	54.2	47.5	54.4	47.5
Daytime: 7 AM – 9 PM	54.4	47.4	54.4	47.5
Overnight: 10 PM – 6 AM	54.1	47.7	54.3	47.6
Morning Commute: 7 AM – 9 AM	54.6	47.3	54.6	47.3
Afternoon Commute: 4 PM – 6 PM	54.7	47.2	54.7	47.3

Note – The values above include driving through communities with reduced speed limits. ***Accounting for the reduced posted speed limit sections, data suggests that current travel speeds are at or above the posted speed limits for the corridor.***

Future (2045) Estimated Travel Speed and Time

Compared to Existing Conditions

Alternative	Speed Change (mph)	Travel Time (minutes)
No-Build	-0.2	+0.3
Super-2	+1.7	-0.3

Possible Travel Time Savings With Bypasses

*(All Communities)**

Assumed Posted Speed Limit (mph)	Est. Travel Time Change (minutes)
55	1
60	5
65	8

**Based on time required to travel a given distance (estimated 42-mile bypass length) at a constant given speed; times are not necessarily representative of a certain number of travel lanes.*

Why Super-2 Highway Recommended

- A Super-2 highway compared to a 4-lane highway
  - Is a lower cost solution
  - Is a better return on taxpayer investment
  - Has less farmland, private property, and natural resource impacts
  - Affects travel patterns, access to existing businesses, and potential railroad conflicts less

US 30 Super-2 Highway vs. 4-Lane Highway	
Construction Cost Difference	When compared to the cost of simply reconstructing an existing 2-lane highway, the **additional** cost to upgrade to a Super-2 is about 15% to 20% of the cost to upgrade to a 4-lane highway.
Right-of-Way and Farmland Impacts	Super-2 impacts are about 1/3 of the those expected with a 4-lane highway and bypasses

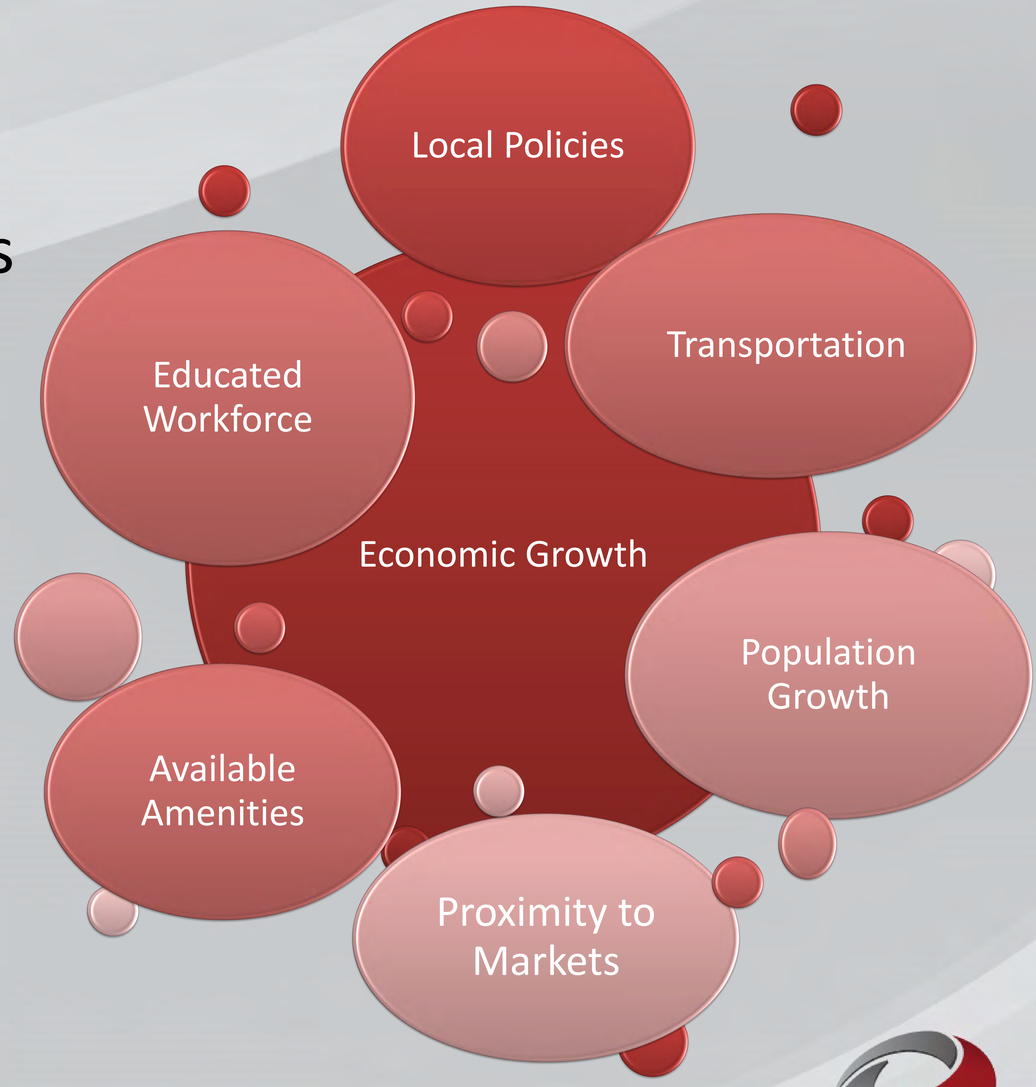
- Super-2 highway style improvements can provide significant safety benefits where safety problems exist
  - US 169 Fort Dodge to Humboldt – 67% crash decrease
  - US 63 Oskaloosa to New Sharon – 49% crash decrease

Why Super-2 Highway Recommended – A Super-2 Will Reliably Meet Expected Future Traffic Needs

- A 2-lane highway can effectively manage between 8,000 to 14,300 vehicles/day and provide smooth traffic flow
- Existing traffic for US 30 ranges from 2,220 to 5,580 vehicles/day
- It is projected that 3,000 to 12,500 vehicles/day will use US 30 by 2045: **a 2-lane highway will still efficiently manage future traffic on US 30**
- For comparison, 2018 traffic counts
  - Main St., Lisbon (local street) – 420 vehicles/day
  - Mill Creek Parkway, Clinton (principle arterial) – 8,000 vehicles/day
  - 1st Avenue (IA 1), Downtown Mount Vernon – 6,900 vehicles/day
  - I-80 (Cedar County) – 36,500 vehicles/day
- Transition to a Super-2 highway can improve safety, reliability, and enhance capacity to meet future transportation needs of a corridor

Economic Considerations

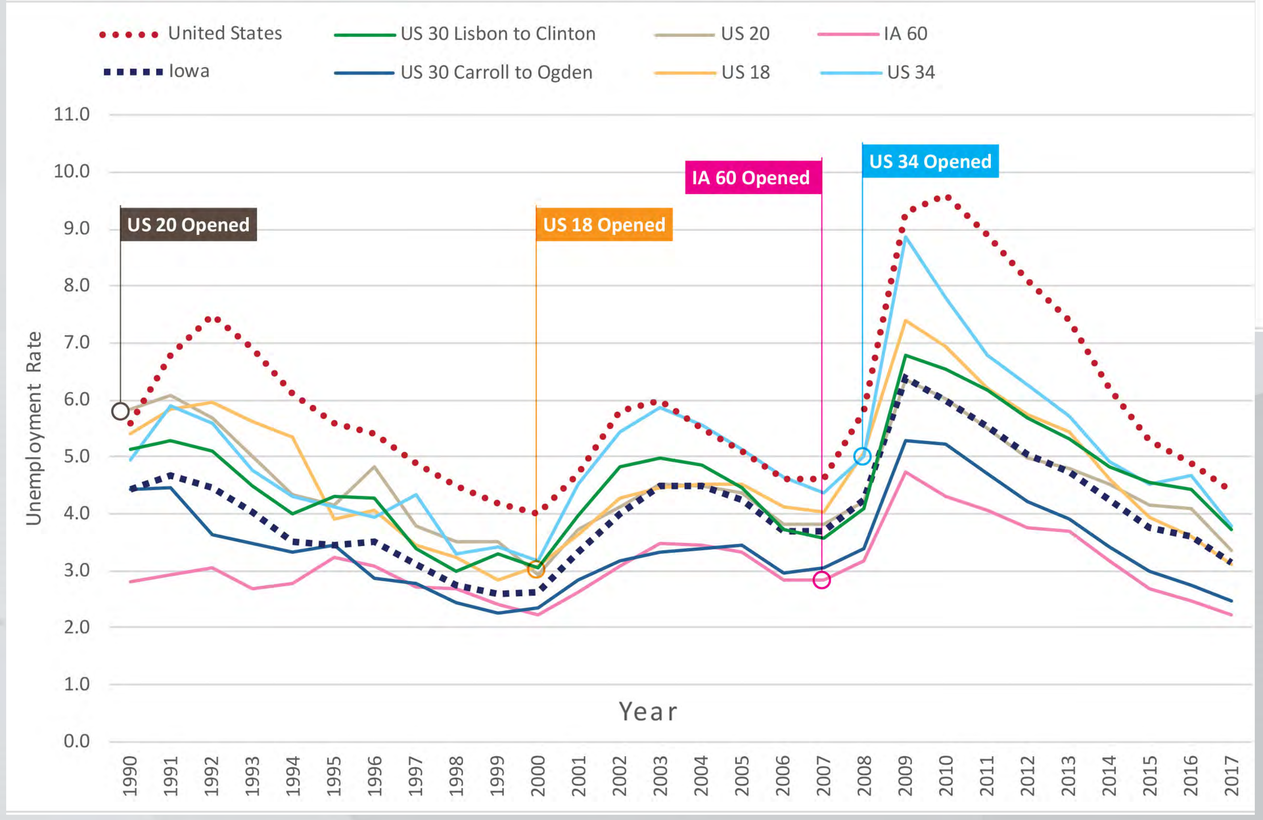
- Local economic trends tend to mimic trends at the state and national level
- No clear correlation between change in economic trends and four-lane highway expansion observed in Iowa case studies or prior studies outside of Iowa
- Analysis suggests that adequate highways support economic growth but four-lane expansion will not create economic growth on its own
- Economic growth depends on additional drivers
  - Population growth
  - Presence of an educated workforce
  - Proximity to markets
  - Local economic development policies
  - Amenities
- Super-2 highway investments can improve the safety, reliability, and consistency of travel and continue to support opportunities for future economic growth



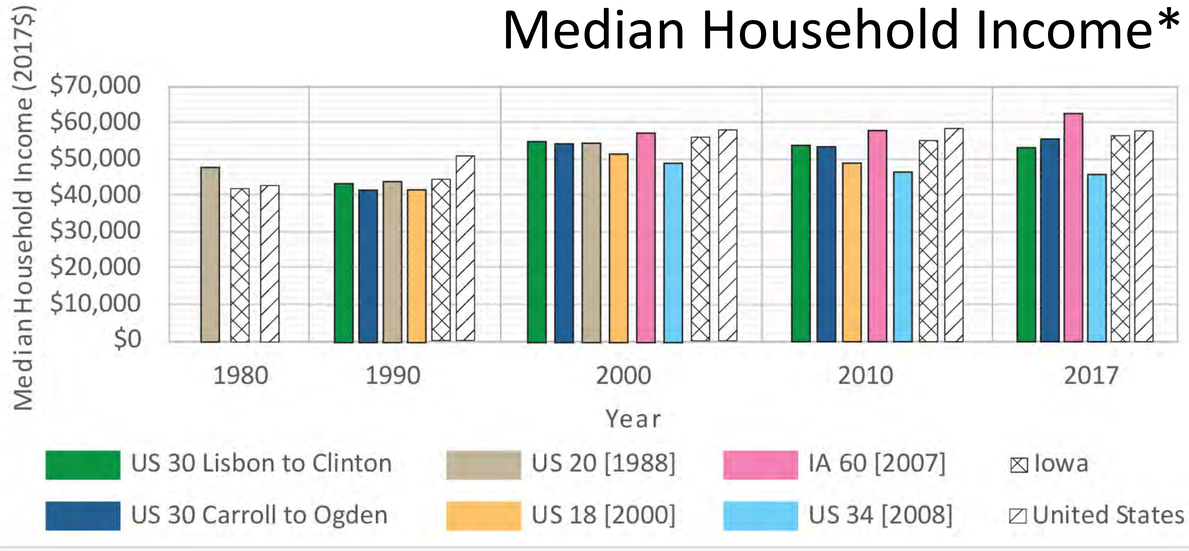
Economic Considerations – Data Trends

Economic performance along 2-lane highway corridors is similar to, or, in some instances, better than 4-lane highways

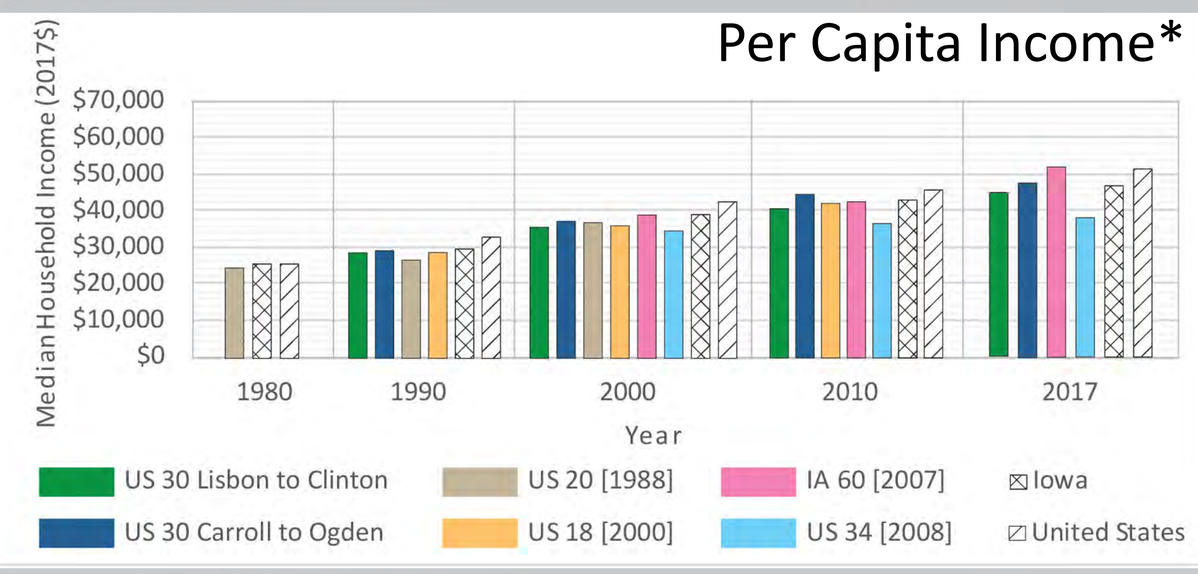
Unemployment



Median Household Income*



Per Capita Income*



*Income data was studied for a 10-year period before and after highway expansion; these charts reflect the 20 years of before-and-after data studied for each of the 4-lane case study corridors.

4-Lane Highways Represented in the Tables

US 20 – Waterloo to Dubuque

US 18 – I-35 to Charles City

IA 60 – LeMars to Sibley

US 34 – Ottumwa to Mt. Pleasant

Why Bypasses Are Not Recommended

- Bypasses are costly and impactful
- Minimal impact expected in communities with Super-2 highway
- Following existing US 30 has less impact on farmland and environmental resources
- Following existing US 30 does not change local travel patterns or railroad crossing needs
- Locations where a shift of US 30 could be considered
  - Locations in close proximity to the UP Railroad to allow for westbound passing lane construction
  - At Mechanicsville to improve US 30 traffic flow when trains are present

Following existing US 30 has less impact on farmland

Location along US 30 where shift could be considered due to close proximity to the UP Railroad

Mechanicsville

- Recommended Improvements
  - –Consideration of realignment to the south to further separate US 30 from UP Railroad
  - –Possible improvements to roadway curves east of Mechanicsville where some injury crashes have occurred
  - –Passing lanes between Mechanicsville and Stanwood and possibly between Mechanicsville and Lisbon
  - –Improve pavement conditions and add rumble strips

- Potential Impacts/Benefits
  - –Types of impacts will depend on if and how far US 30 is shifted at Mechanicsville - primarily farm land impacts expected but business impacts and possible relocations may be necessary
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Remove vehicle backups from US 30 when trains are present and greater separation of railroad and US 30 intersection aids large vehicles

Stanwood

- Recommended Improvements
  - –Generally maintain existing alignment
  - –Widen pavement, as needed, and update pavement markings to add two-way left turn lane in town
  - –Intersection improvements/addition of turn lanes at IA 38 intersections
  - –Passing lanes between Mechanicsville and Stanwood and between Stanwood and Clarence
  - –Improve pavement conditions and add rumble strips

- Potential Impacts/Benefits
  - –Some ROW impacts and possible access modifications – relocations are not expected
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Improved US 30 traffic in Stanwood by removing turning vehicles from the thru-way
  - –Improved intersection performance at the junctions of IA 38 and US 30

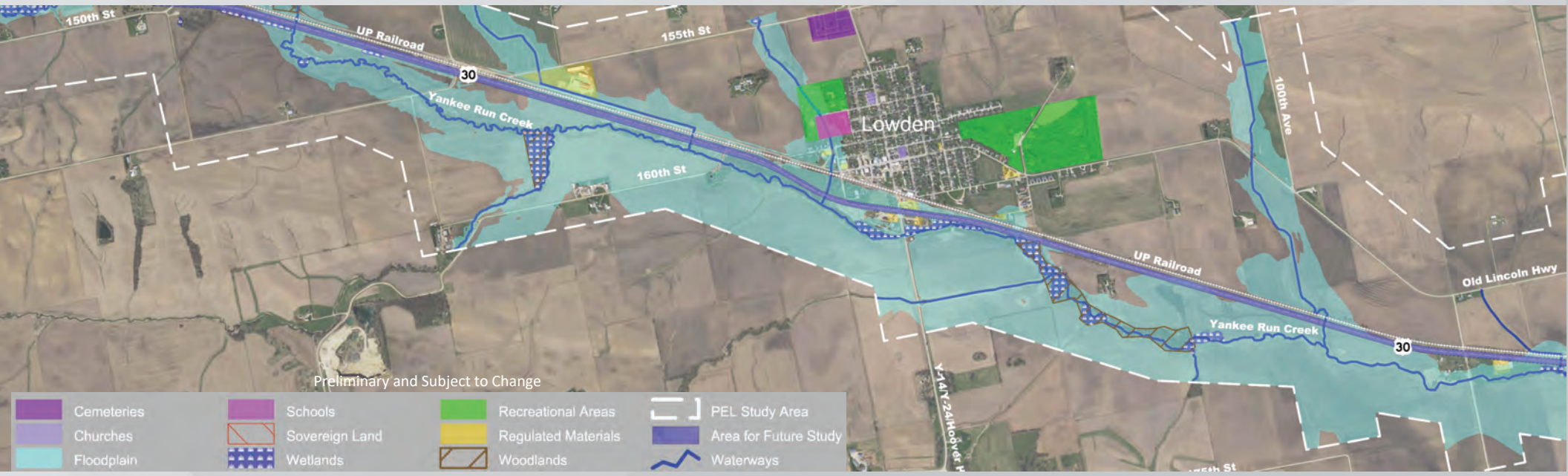
Clarence

- Recommended Improvements
  - –Add passing lanes between Stanwood and Clarence and between Clarence and Lowden
  - –Generally maintain existing alignment; east of Clarence shift US 30 to the south to provide spacing between US 30 and the railroad for a westbound passing lane
  - –Improve pavement conditions and add rumble strips west of Clarence
  - –Widen pavement, as needed, and update pavement markings to add two-way left turn lane in town
  - –Consider right turn lanes at Co. Rd X-64 and some local road intersections in Clarence

- Potential Impacts/Benefits
  - –Possible loss of some on-street parking
  - –Some ROW impacts and possible access modifications – a few relocations could be possible
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Improved US 30 traffic in Clarence by removing turning vehicles from the thru-way
  - –Possible impacts to Yankee Run Creek and associated floodplains

Lowden

- Recommended Improvements
  - –Add passing lanes between Clarence and Lowden and between Lowden and Wheatland
  - –Generally maintain existing roadway alignment but shift US 30 to the south for a westbound passing lane
  - –Widen pavement, as needed, and update pavement markings to add two-way left turn lane in town
  - –Possible intersection improvements and right turn lanes at Co. Rd Y-14



- Potential Impacts/Benefits
  - –Minimal ROW impacts and/or possible access modifications expected – no relocations anticipated
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Improved US 30 traffic in Lowden by removing turning vehicles from the thru-way
  - –Impacts to Yankee Run Creek existing drainage structures and associated floodplains likely
  - –Improved intersection performance at the junctions of CR Y-14 and US 30

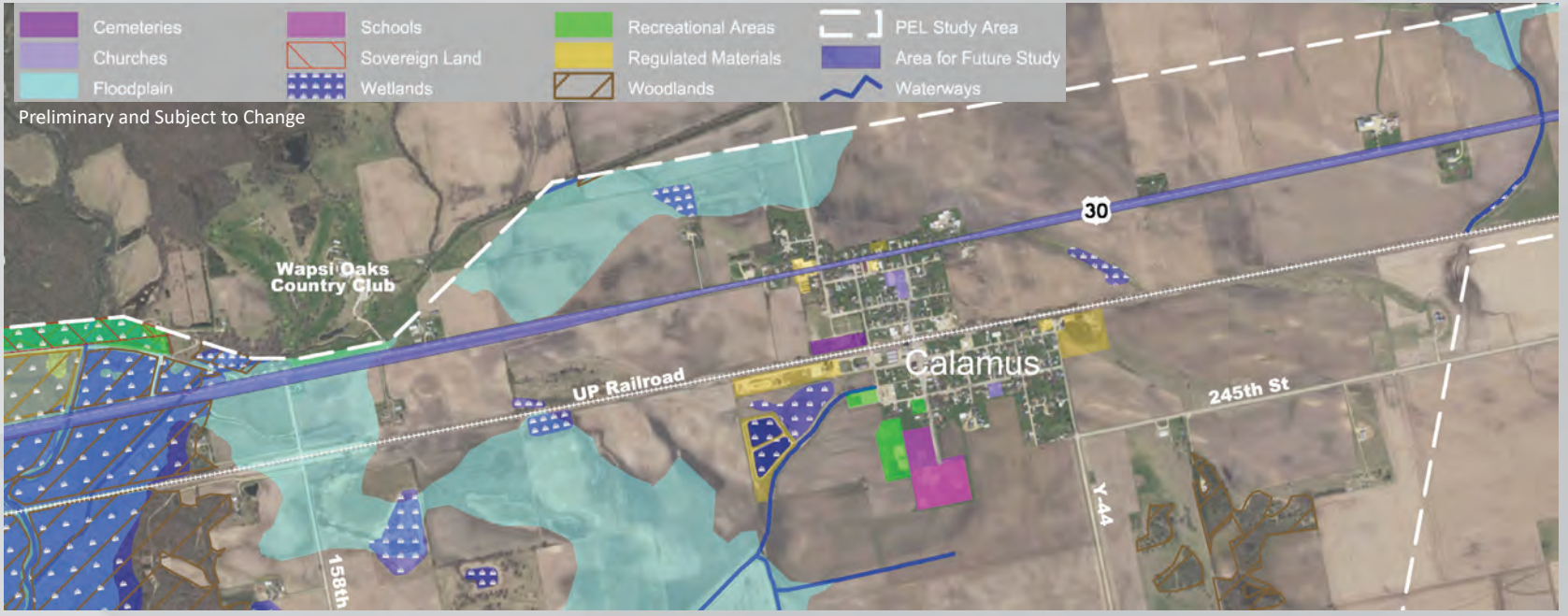
Wheatland

- Recommended Improvements
  - –Add passing lanes between Lowden and Wheatland and between Wheatland and Calamus
  - –Generally maintain existing roadway alignment but shift US 30 west of Wheatland for a westbound passing lane and east of Wheatland to maintain traffic during bridge replacement construction
  - –Widen pavement, as needed, and update pavement markings to add two-way left turn lane in town
  - –Possible intersection improvements and right turn lanes at Co. Rd Y-4E
  - –Coordinate roadway improvements with planned bridge replacement projects

- Potential Impacts/Benefits
  - –Minimal ROW impacts and/or possible access modifications expected – no relocations anticipated
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Improved US 30 traffic in Wheatland by removing turning vehicles from the thru-way
  - –Impacts to sensitive environmental areas likely, possible mitigation needs to be considered
  - –Improved intersection performance at the junctions of CR Y-4E and US 30

Calamus

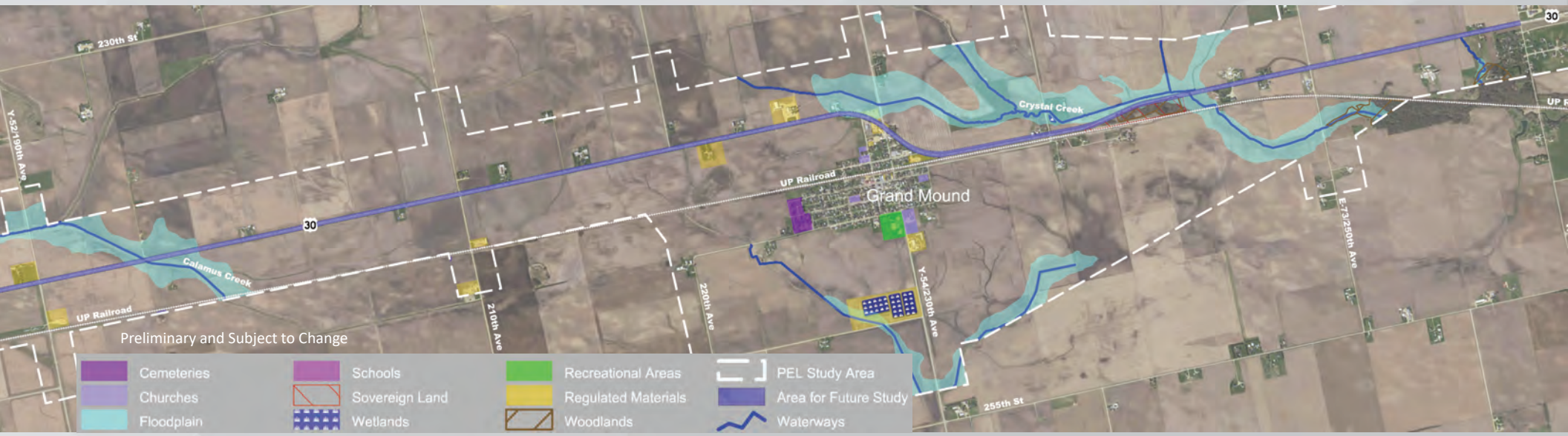
- Recommended Improvements
  - –Add passing lanes between Wheatland and Calamus and between Calamus and Grand Mound
  - –Generally maintain existing roadway alignment but shift US 30 west of Calamus to maintain traffic during bridge replacement construction
  - –Widen pavement, as needed, and update pavement markings to add two-way left turn lane in town
  - –Add westbound right turn lane at Co. Rd Y-44
  - –Coordinate roadway improvements with planned bridge replacement projects



- Potential Impacts/Benefits
  - –Some ROW impacts and possible access modifications – relocations are not expected at this time
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Improved US 30 traffic in Calamus by removing turning vehicles from the thru-way
  - –Improved intersection performance at the junction of CR Y-44 and US 30

Grand Mound

- Recommended Improvements
  - –Add passing lanes between Calamus and Grand Mound; consider passing lanes east of Grand Mound
  - –Generally maintain existing roadway alignment but shift US 30 just east of Grand Mound, as needed, to accommodate an eastbound passing lane
  - –Widen pavement, as needed, and update pavement markings to add two-way left turn lane in town
  - –Consider intersection improvements and possible right turn lanes at CR Y-54 and other local roadways in town



- Potential Impacts/Benefits
  - –Some ROW impacts and possible access modifications – relocations are not expected
  - –Travel patterns through town not affected including required at-grade crossing of UP Railroad
  - –Improved US 30 traffic in Grand Mound by removing turning vehicles from the thru-way
  - –Improved intersection performance by adding turn lanes and minimizing intersection skew

US 30 Improvement Implementation Roadmap

- Improvements as opportunities present themselves
  - Part of maintenance and rehabilitation projects
  - As construction funding allows
- Possible improvement considerations (not in order of priority)
  - Improve the condition of the roadway through pavement upgrades and bridge rehab/replacements
  - Add passing lanes between each of the communities
  - Pavement widening and/or pavement markings
  - Addition of turn lanes/spot intersection improvements
  - Paved roadway shoulders (critical sections with farm equipment)
  - Rumble strips
  - Railroad and US 30 spacing improvements

US 30 Corridor – Next Steps

PEL Study

Environmental Planning

- Environmental Planning Studies and Preliminary Engineering

Engineering

- Final Engineering Design

Construction

- Improvement Projects Programmed for Construction

Next Step

Super-2 and Other Recommended Improvements:

- Depend on available funding
- Likely opportunistic projects in combination with planned repair, rehabilitation, and reconstruction projects
- Two bridge replacement projects between Wheatland and Calamus are in the Iowa DOT 5-year improvement plan

APPENDIX F
SUPER-2 HIGHWAY PASSING LANE ALTERNATIVES – RURAL HIGHWAY SECTIONS

APPENDIX F—SUPER-2 RURAL HIGHWAY SECTION PASSING LANE ALTERNATIVES

The passing lane alternatives analysis sought to consider the individual rural highway segments needs and constraints as well as corridor-wide needs of a Super-2 highway corridor. From a corridor-wide perspective, spacing of 4 to 5 miles between adjacent passing lane locations was desired, and the following elements were addressed during individual highway segment analysis:

- Passing lane length
- Roadway grades, curvature, and sight distance
- Travel speed transitional areas approaching and leaving the local communities
- Bridge and large drainage culvert locations
- Density of local roadway intersections/private property access points
- Union Pacific (UP) Railroad right-of-way
- Paved local roadways intersecting United States Highway (US 30)
- Highway segment context, including existing development (homes, business, out-buildings, etc.) and environmentally sensitive areas (wetlands, floodplain, recreational area, cemeteries, etc.)

Except for under special circumstances, the following components of passing lane alternatives were noted as unfavorable for future study: bridges, intersections with paved side roads, a large density of local access points, and areas with a high likelihood of affecting the Yankee Run Creek channel.

Tables F1 through F8 summarize the alternatives identified and recommended for future study. Figures highlighting the general locations of the identified alternatives follow.

Table F1. West of Mechanicsville Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Key Features
Westbound Option 1	• US 30 realignment needed to avoid impacts to the UP Railroad right-of-way. • Approximately 1 mile from the Lisbon Bypass. • Spacing to passing lanes east of Mechanicsville could be between 2 and 6 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.
Westbound Option 2	• US 30 realignment needed to avoid impacts to the UP Railroad right-of-way • Approximately 2 miles from the Lisbon Bypass. • Spacing to passing lanes east of Mechanicsville could be between less than 1 and about 4.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.

Table F1. West of Mechanicsville Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Key Features
Eastbound Option 1	• Approximately 1.5 miles from the Lisbon Bypass. • Spacing to passing lanes east of Mechanicsville could be between 1 and 5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.
Eastbound Option 2	• Approximately 2 miles from the Lisbon Bypass. • Spacing to passing lanes east of Mechanicsville could be between less than 1 mile and 4.5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.

Table F2. Mechanicsville to Stanwood Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 1	• US 30 realignment needed to avoid impacts to the UP Railroad right-of-way. • Approximately 4.4 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • If a passing lane is present west of Mechanicsville, resultant spacing will be approximately 2 miles or less. • Spacing to passing lanes east of Stanwood could be between 6 and 8 miles.
Westbound Option 3	• Approximately 7.6 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • If a passing lane is present west of Mechanicsville, resultant spacing will be approximately 4 to 5.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing. • Spacing to passing lanes east of Stanwood could be between about 3 to 4.5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.

Table F2. Mechanicsville to Stanwood Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 4	• Approximately 8.1 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • If a passing lane is present west of Mechanicsville, resultant spacing will be approximately 4.5 to 6 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Stanwood could be between about 2.5 and 4 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 1	• Approximately 4.5 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • If a passing lane is present west of Mechanicsville, resultant spacing will be approximately 1 mile or less. • Spacing to passing lanes east of Stanwood could be approximately between 5.5 and 7.5 miles.
Eastbound Option 2	• Some potential floodplain impacts to evaluate further. • Approximately 6.5 to 7 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • Assuming a passing lane west of Mechanicsville is present, the combination of alternatives east of Mechanicsville will likely result in spacing of 3 to 3.5 miles. • Spacing to passing lanes east of Stanwood could be between 3 and 5.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.
Eastbound Option 3	• Some potential floodplain impacts to evaluate further. • Approximately 7 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • If as passing lane is present west of Mechanicsville, resultant spacing will be approximately 3.5 to 4 miles. • Spacing to passing lanes east of Stanwood could be between 3 and 5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.

Table F2. Mechanicsville to Stanwood Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Eastbound Option 4	• Approximately 8.1 miles from the Lisbon Bypass (assuming no passing lane west of Mechanicsville). • Assuming a passing lane west of Mechanicsville is present, the combination of alternatives east of Mechanicsville will likely result in spacing of 4.5 to 5 miles. • Spacing to passing lanes east of Stanwood could be between about 2 and 4 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.

Table F3. Stanwood to Clarence Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 2	• Spacing to passing lanes west of Stanwood could be approximately between 2 and 3 miles or about 6 miles. • Spacing to passing lanes east of Clarence could be between 3.5 to 5 and 7.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.
Westbound Option 3	• Spacing to passing lanes west of Stanwood could be approximately between 2.5 and 3.5 miles or about 6.5 miles. • Spacing to passing lanes east of Clarence could be between 3 and 7 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.
Westbound Option 5	• Minimal distance between the speed transition zone at existing Clarence and the bridge over Mill Creek. • Spacing to passing lanes west of Stanwood could be between 4 and 7.5 to 8 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing. • Spacing to passing lanes east of Clarence could be between 2 and 6 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.
Eastbound Option 2	• Spacing to passing lanes west of Stanwood could be between 2 and 5.5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Clarence could be between 3.5 and 8 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.

Table F3. Stanwood to Clarence Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Eastbound Option 3	• Spacing to passing lanes west of Stanwood could be between 3 and 6.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing. • Spacing to passing lanes east of Clarence could be between 2.5 and 7 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 4	• Near speed transition zone approaching Clarence. • Spacing to passing lanes west of Stanwood could be between 4 and 7.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing • Spacing to passing lanes east of Clarence could be between 1.5 and 3.5 miles or about 6 miles.

Table F4. Clarence to Lowden Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 1	• A greater distance from Yankee Run Creek than some other alternatives. • Spacing to passing lanes west of Clarence could be between 2 and 3.5 to 4 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Lowden could be approximately between 5.5 and 9 miles.
Westbound Option 2	• Located closer to Yankee Run Creek than some other alternatives but impacts to the creek channel are not anticipated. • Spacing to passing lanes west of Clarence could be between 3.5 and 5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing. • Spacing to passing lanes east of Lowden could be between 4 and 7.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing.
Westbound Option 3	• A greater distance from Yankee Run Creek than some other alternatives. • Spacing to passing lanes west of Clarence could be approximately between 6 and 7.5 miles. • Spacing to passing lanes east of Lowden could be between 2 and 5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.

Table F4. Clarence to Lowden Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Eastbound Option 1	• A greater distance from Yankee Run Creek than some other alternatives. • Spacing to passing lanes west of Clarence could be between 1.5 and 3.5 miles. • Spacing to passing lanes east of Lowden could be between 6 and 9 miles. • It may be possible to incorporate two eastbound passing lane sections between Clarence and Lowden; approximate spacing of 3.5 to 4 miles with Clarence to Lowden Eastbound Option 4.
Eastbound Option 2	• A greater distance from Yankee Run Creek than some other alternatives. • Spacing to passing lanes west of Clarence could be between 3 and 5.5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing. • Spacing to passing lanes east of Lowden could be between 4.5 and 7 miles with an alternative that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 4	• A greater distance from Yankee Run Creek than some other alternatives. • Spacing to passing lanes west of Clarence could be between 6 and 8 miles. • Spacing to passing lanes east of Lowden could be about 1.5 to 2 miles or about 4.5 miles. • It may be possible to incorporate two eastbound passing lane sections between Clarence and Lowden; approximate spacing of 3.5 to 4 miles with Clarence to Lowden Eastbound Option 1.

Table F5. Lowden to Wheatland Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 1	• Spacing to passing lanes west of Lowden could be between 2 and 5.5 to 6 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Wheatland could be between 4.5 to 5 miles and 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.
Westbound Option 3	• Spacing to passing lanes west of Lowden could be between 3 and 6.5 to 7 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Wheatland could be between just under 4 miles or about 5.5 miles.

Table F5. Lowden to Wheatland Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 5	• Spacing to passing lanes west of Lowden could be between 5 and 8.5 to 9 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Wheatland could be less than 3.5 miles.
Eastbound Option 2	• Spacing to passing lanes west of Lowden could be between 4.5 and 6 to 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Wheatland could be between 5 and 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 4	• Spacing to passing lanes west of Lowden could be between 4.5 and 8.5 to 9 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Wheatland could be between 2.5 and 3.5 to 4 miles with an alternative that makes the desired 4- to 5-mile spacing possible.

Table F6. Wheatland to Calamus Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 3	• Includes multiple bridge crossings with a passing lane length about 0.75 mile longer than suggested in Iowa DOT design guidance to address stakeholder comments regarding movement of large agricultural equipment and limited available Wapsipinicon River crossings. • Passes through sensitive environmental areas. • Spacing to passing lanes west of Wheatland could be between 2 and 5 miles; more than one combination of alternatives will likely maintain the desired 4- to 5-mile spacing. • Spacing to passing lanes east of Calamus could be between 4.5 and 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.

Table F6. Wheatland to Calamus Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 4	• Minimizes possible impact to sensitive environmental areas. • Does not include any bridges. • Spacing to passing lanes west of Wheatland could be between 3.5 and 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Calamus could be between 3.5 and 5 to 5.5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 2	• Includes multiple bridge crossings with a passing lane length about 0.75 mile longer than suggested in Iowa DOT design guidance to address stakeholder comments regarding movement of large agricultural equipment and limited available Wapsipinicon River crossings. • Passes through sensitive environmental areas. • Spacing to passing lanes west of Wheatland could be between 2.5 and 5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Calamus could be between 2 and 6 miles with an alternative that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 3	• Minimizes possible impact to sensitive environmental areas. • Does not include any bridges. • Spacing to passing lanes west of Wheatland could be between 3.5 to 4 and 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible. • Spacing to passing lanes east of Calamus could be between 1 and 5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.

Note:

DOT = Department of Transportation

Table F7. Calamus to Grand Mound Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Westbound Option 2	• Approximately 5.5 miles from the four-lane US 30 section west of DeWitt (assuming no westbound passing lane east of Ground Mound). • Spacing to passing lanes west of Calamus could be between 3.5 and 4.5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.
Westbound Option 4	• Approximately 3.5 miles from the four-lane US 30 section west of DeWitt (assuming no westbound passing lane east of Ground Mound). • Spacing to passing lanes west of Calamus could be between 5 and 6.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 1	• Approximately 7.9 miles from the four-lane US 30 section west of DeWitt (assuming no eastbound passing lane east of Ground Mound). • If a passing lane is present east of Grand Mound, resultant spacing will be approximately 5 miles. • Spacing to passing lanes west of Calamus could be approximately between 1 and 2 miles.
Eastbound Option 2	• Approximately 5.5 to 6 miles from the four-lane US 30 section west of DeWitt (assuming no eastbound passing lane east of Ground Mound). • If a passing lane is present east of Grand Mound, resultant spacing will be approximately 2.5 to 3 miles. • Spacing to passing lanes west of Calamus could be approximately between 3.5 and 4 to 4.5 miles with an alternative that makes the desired 4- to 5-mile spacing possible.
Eastbound Option 5	• Approximately 4 miles from the four-lane US 30 section west of DeWitt (assuming no eastbound passing lane east of Ground Mound). • If a passing lane is present east of Grand Mound, resultant spacing will be approximately 1 to 1.5 miles. • Spacing to passing lanes west of Calamus could be approximately between 5 and 6 miles with an alternative that makes the desired 4- to 5-mile spacing possible.

Table F8. Grand Mound to DeWitt Recommended Passing Lane Alternative Study Findings

Passing Lane Alternative	Alternative Key Features
Eastbound Option 1	• US 30 realignment needed to avoid impacts to the UP Railroad right-of-way. • Highway curves could be present along the passing lane. • Avoids impact to possible Sovereign Lands but impacts to floodplain and Crystal Creek will need to be considered. • Approximately 2 miles from the four-lane US 30 section west of DeWitt. • Spacing to passing lanes west of Grand Mound could be approximately between 1 and 5 miles with a combination of alternatives that makes the desired 4- to 5-mile spacing possible.

Lincoln Highway

Delta Ave

WB Passing Lane Option 2

WB Passing Lane Option 1

MP 272

Approx. Existing ROW

Union Pacific Railroad

30

Approx. Existing ROW

30

Eureka Ave

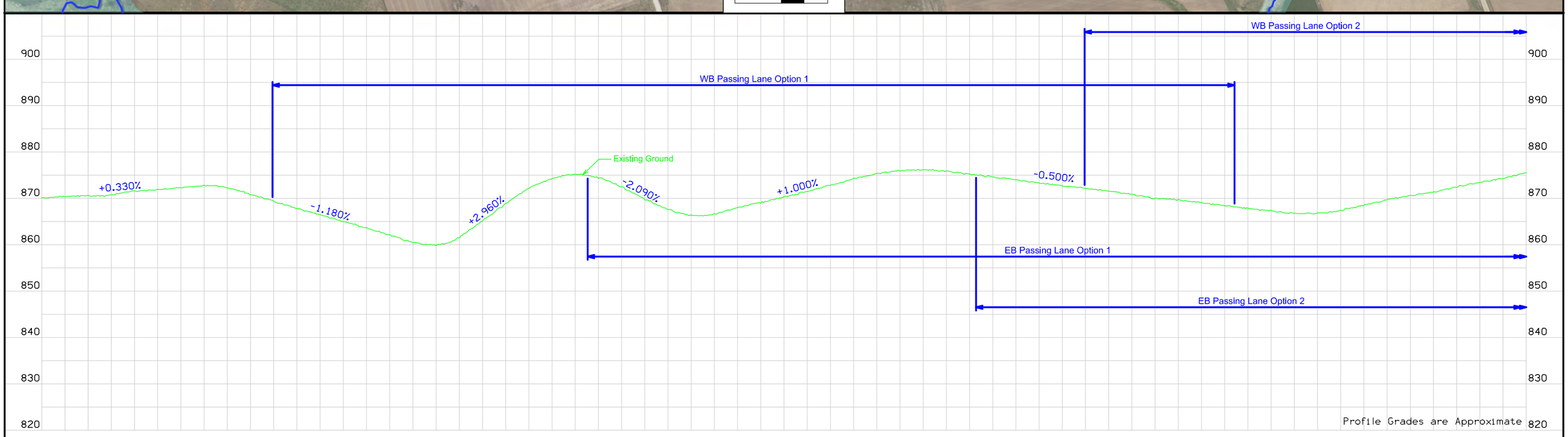
EB Passing Lane Option 1

EB Passing Lane Option 2

LEGEND

- Cemeteries
- Churches
- Floodplain
- Schools
- Sovereign Land
- Area for Future Study
- Recreational Areas
- Regulated Materials
- Woodlands
- Wetlands
- Waterways

0 FEET 500



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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives West of Mechanicsville to Mechanicsville	Sheet 1 of 2

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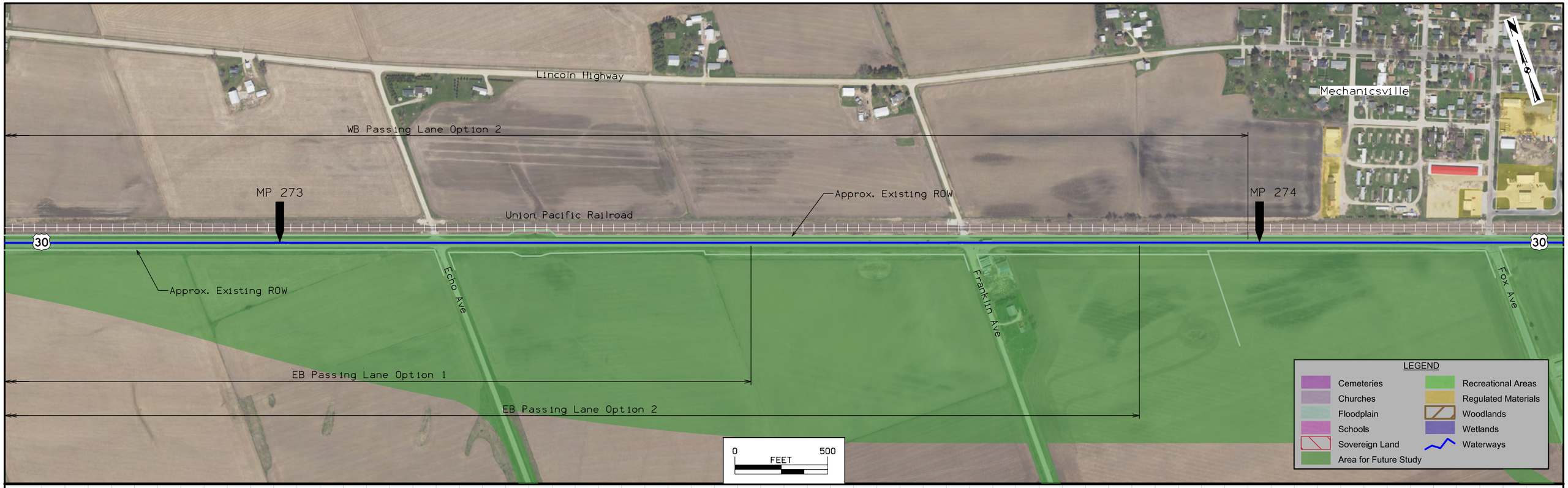

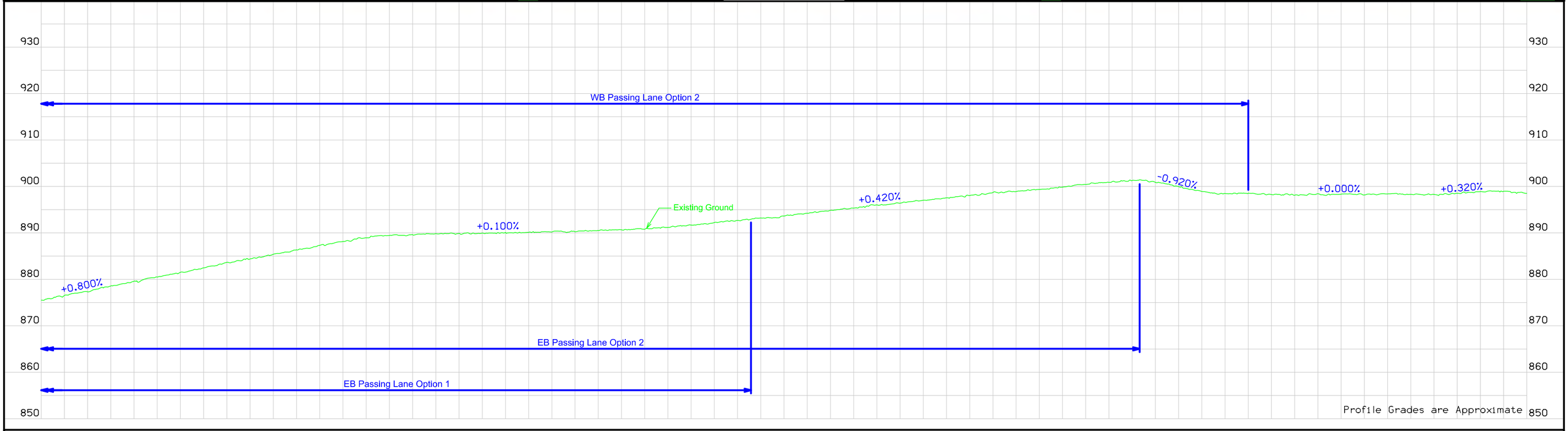

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Description

US Highway 30 PEL Study Corridor
Recommended Super Two Passing Lane Alternatives
West of Mechanicsville to Mechanicsville

March 2020

Sheet 2 of 2

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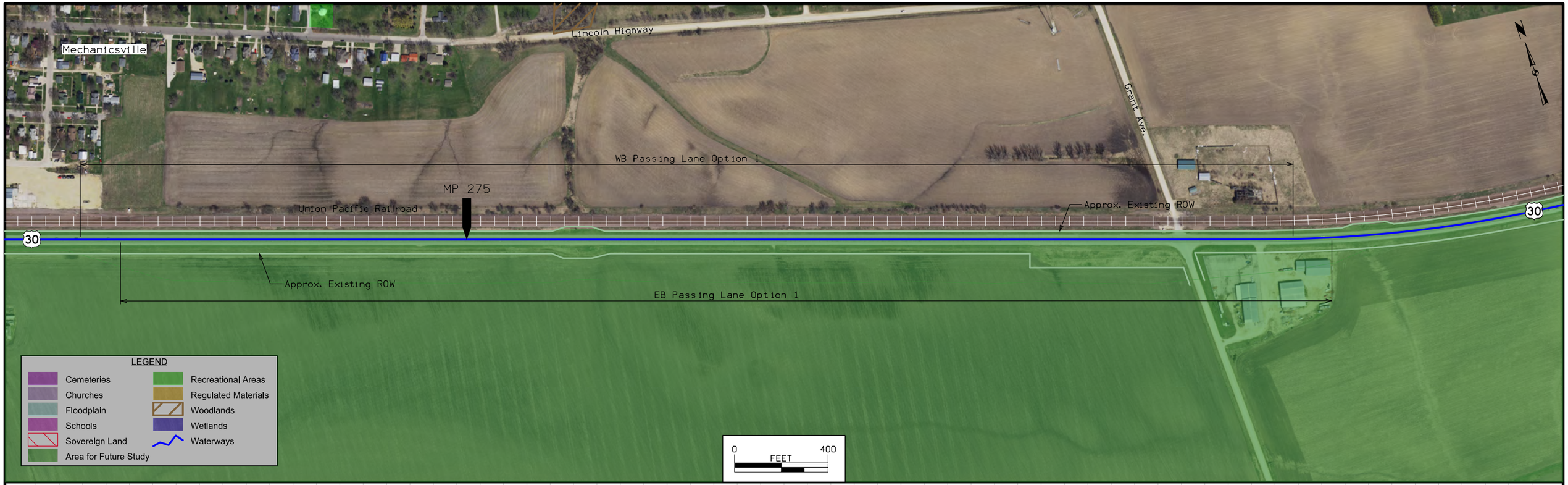

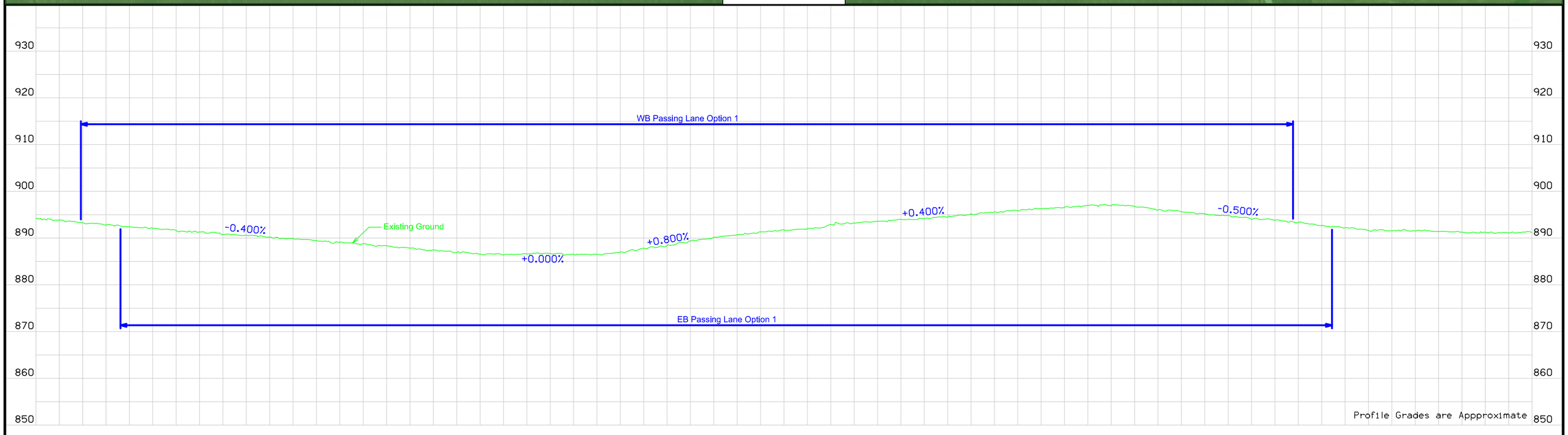

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Mechanicsville to Stanwood	Sheet 1 of 3

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LEGEND

- Cemeteries
- Churches
- Floodplain
- Schools
- Sovereign Land
- Area for Future Study
- Recreational Areas
- Regulated Materials
- Woodlands
- Wetlands
- Waterways

MP 277

MP 278

Approx. Existing ROW

Approx. Existing ROW

WB Passing Lane Option 3

EB Passing Lane Option 3

EB Passing Lane Option 2

Indian Ave

X-46/Jackson Ave

30

30

0 400 FEET

900
890
880
870
860
850
840
830
820

-0.520%

-1.060%

-2.500%

+2.000%

+0.390%

+0.700%

-3.350%

WB Passing Lane Option 3

Existing Ground

EB Passing Lane Option 2

EB Passing Lane Option 3

Profile Grades are Appproximate

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Description

US Highway 30 PEL Study Corridor
Recommended Super Two Passing Lane Alternatives
Mechanicsville to Stanwood

March 2020

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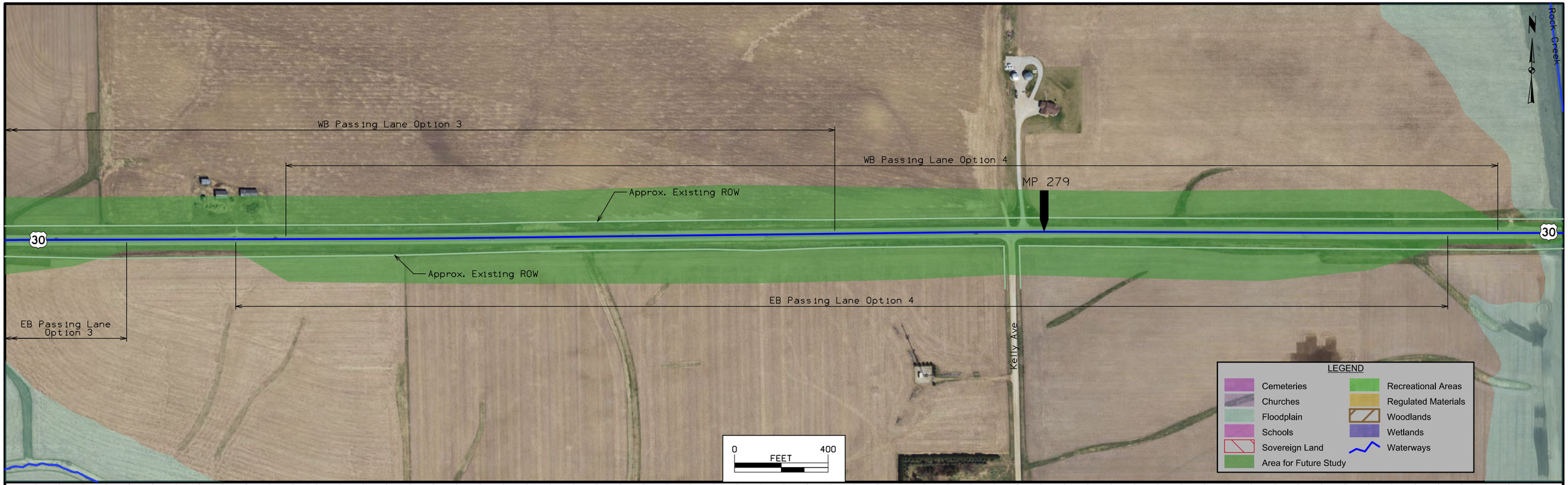

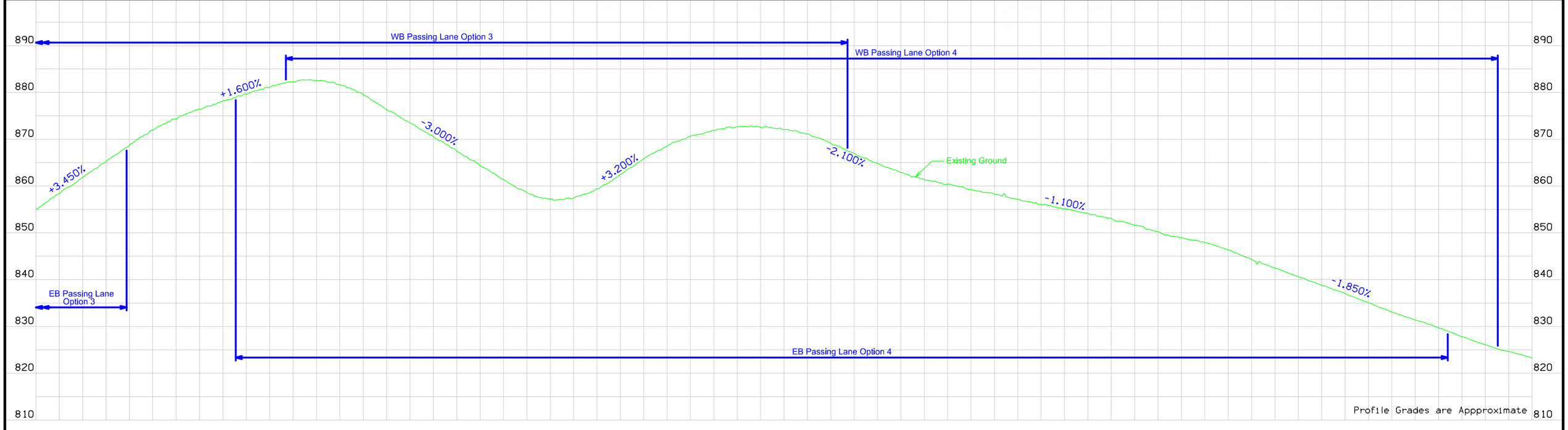

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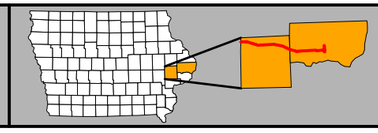

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Mechanicsville to Stanwood	Sheet 3 of 3

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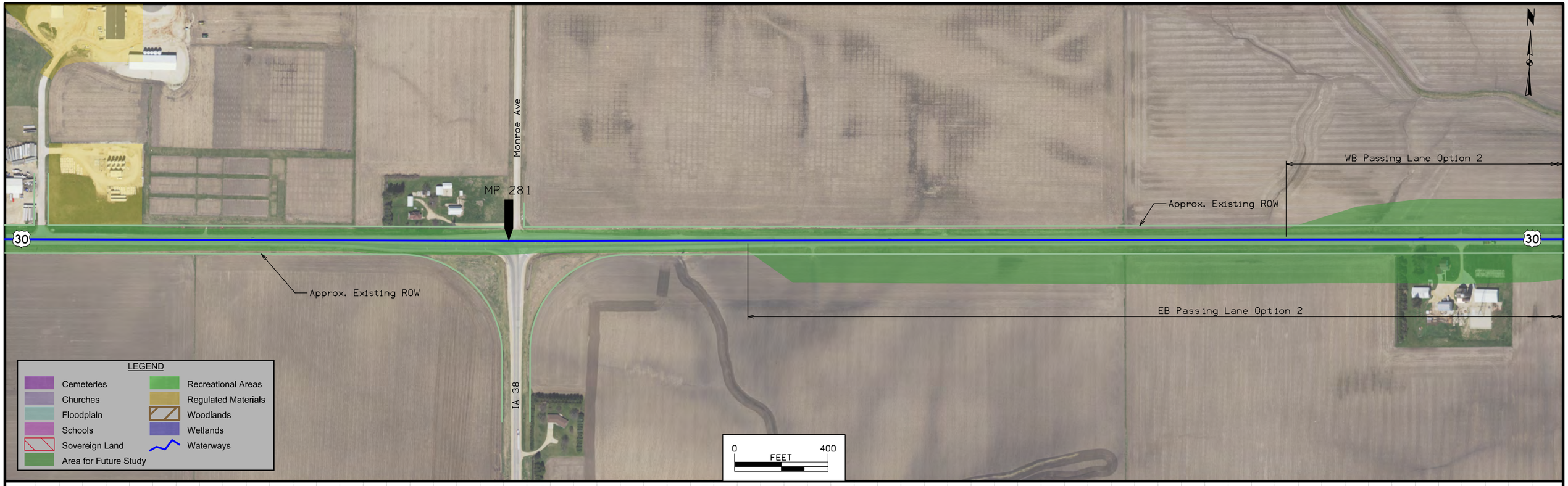

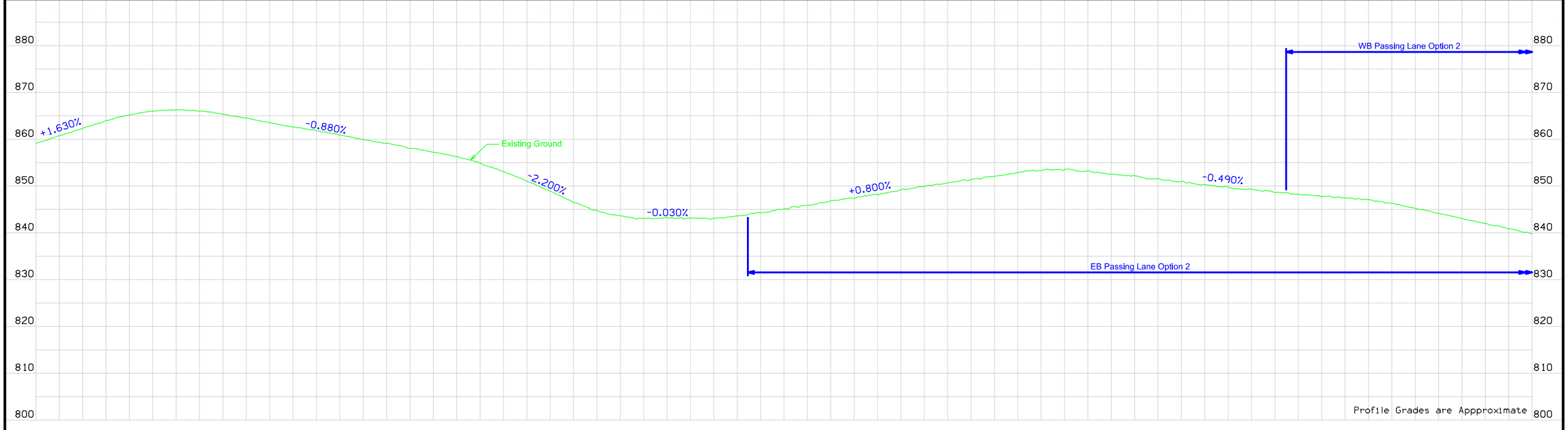

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Stanwood to Clarence	Sheet 1 of 3

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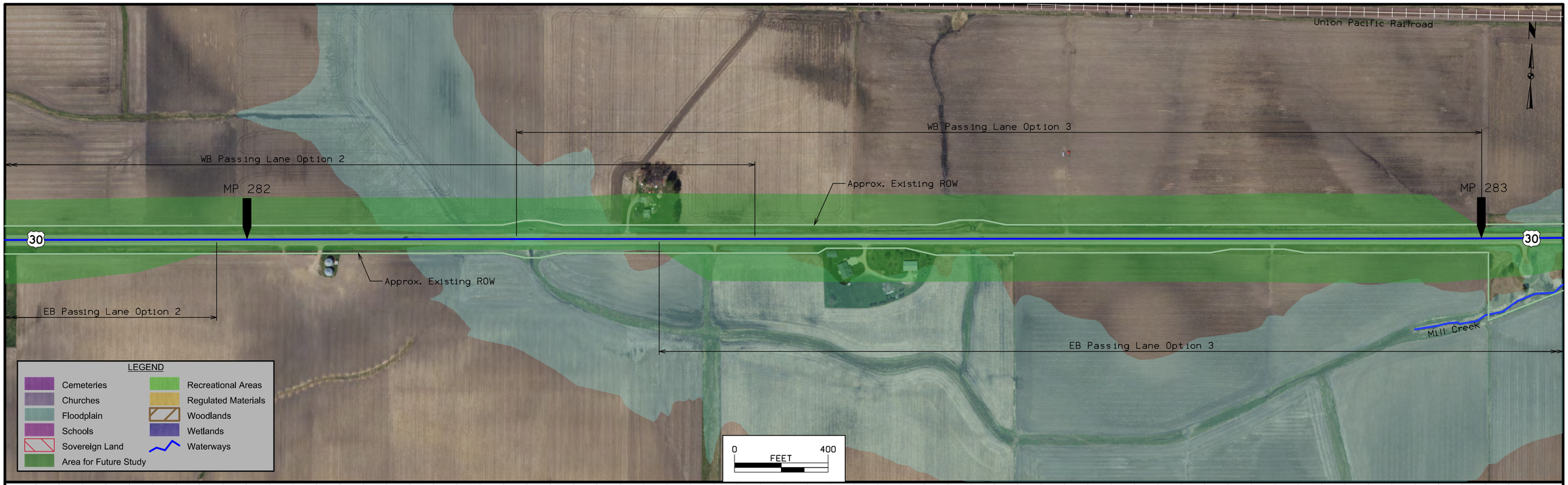

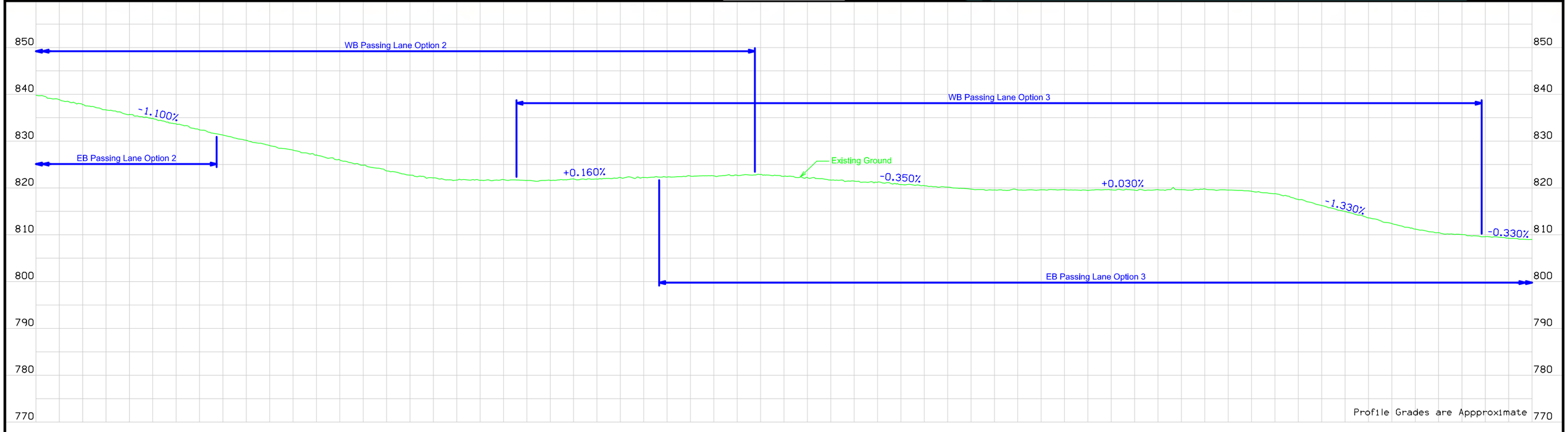

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Stanwood to Clarence	Sheet 2 of 3

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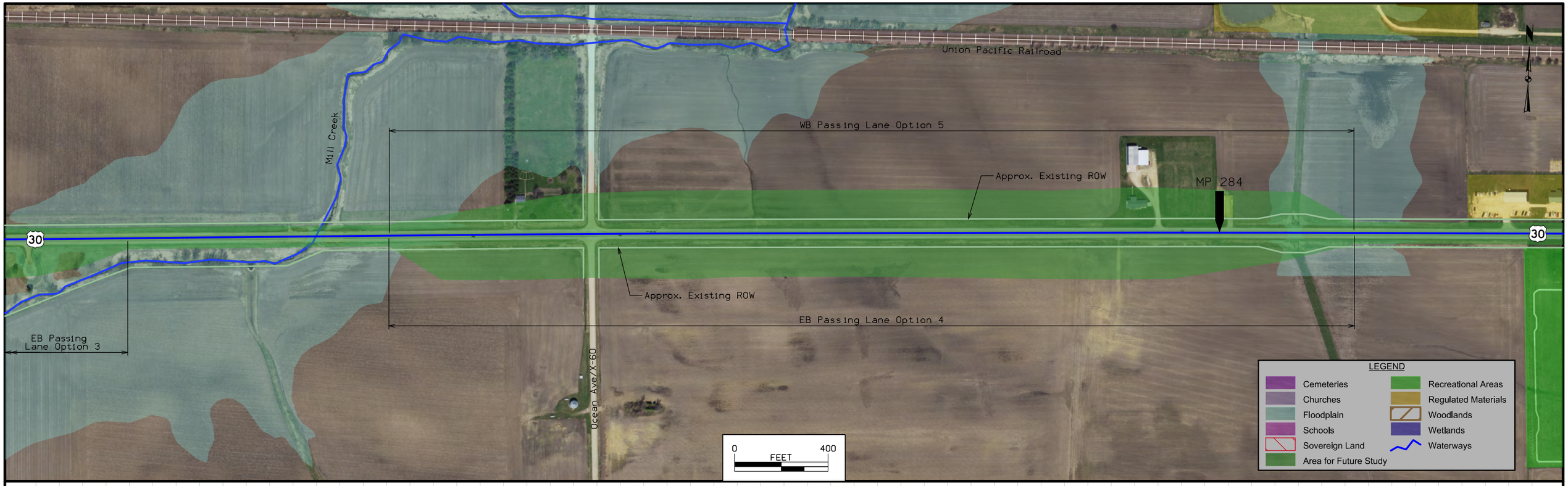
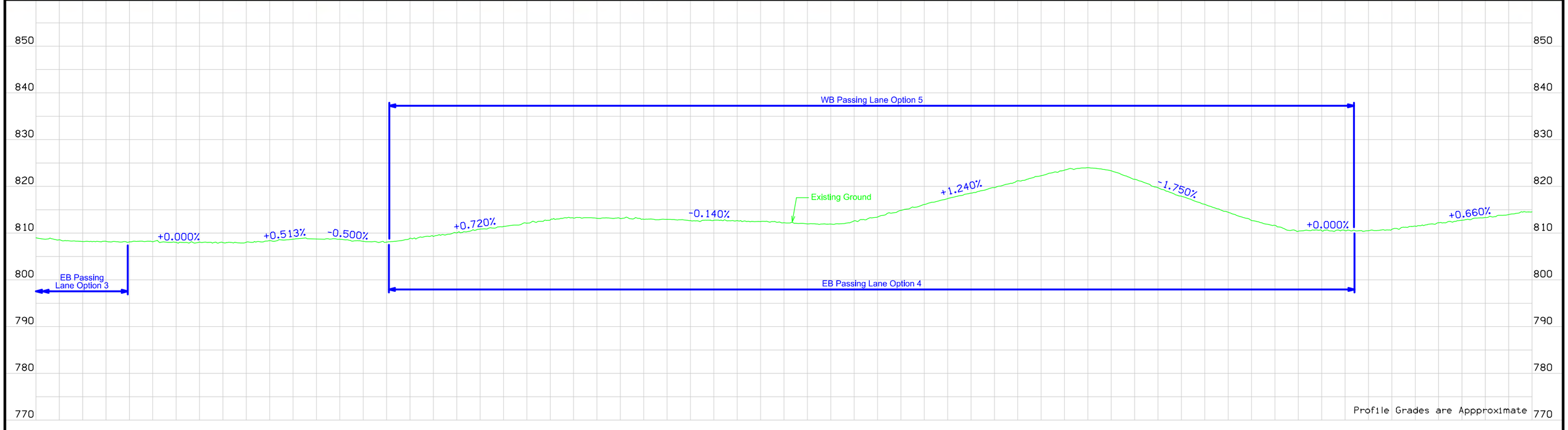
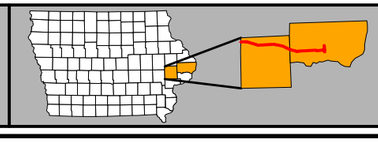




IOWADOT		Jacobs	**Description** **US Highway 30 PEL Study Corridor** **Recommended Super Two Passing Lane Alternatives** **Stanwood to Clarence**	**March 2020** **Sheet 3 of 3**

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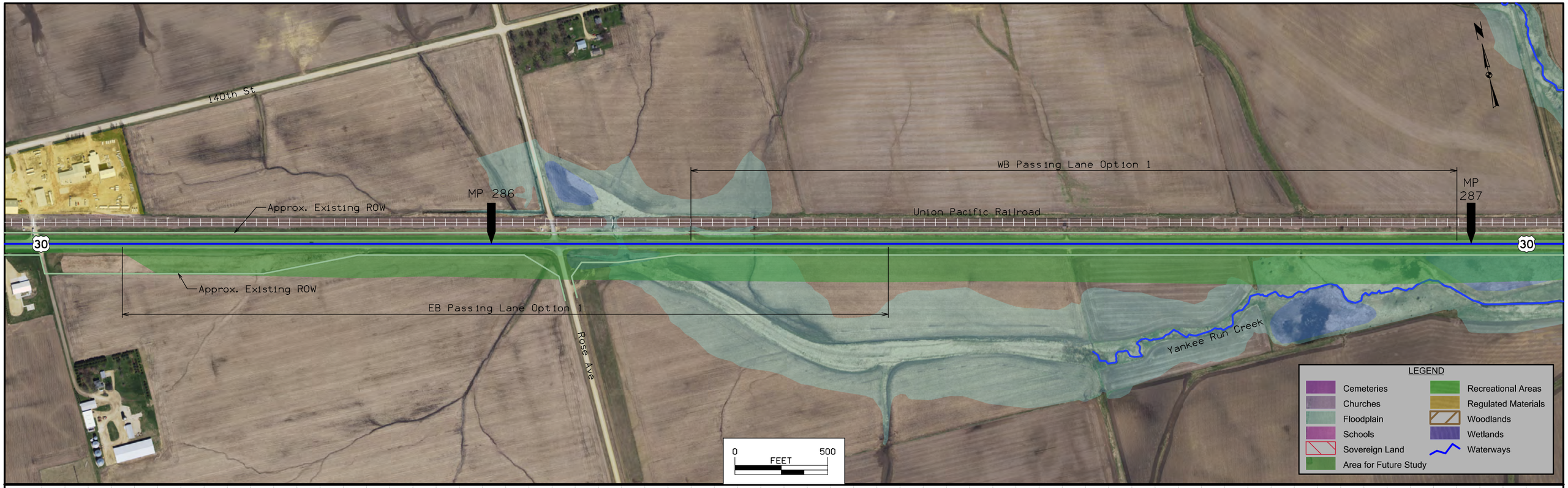

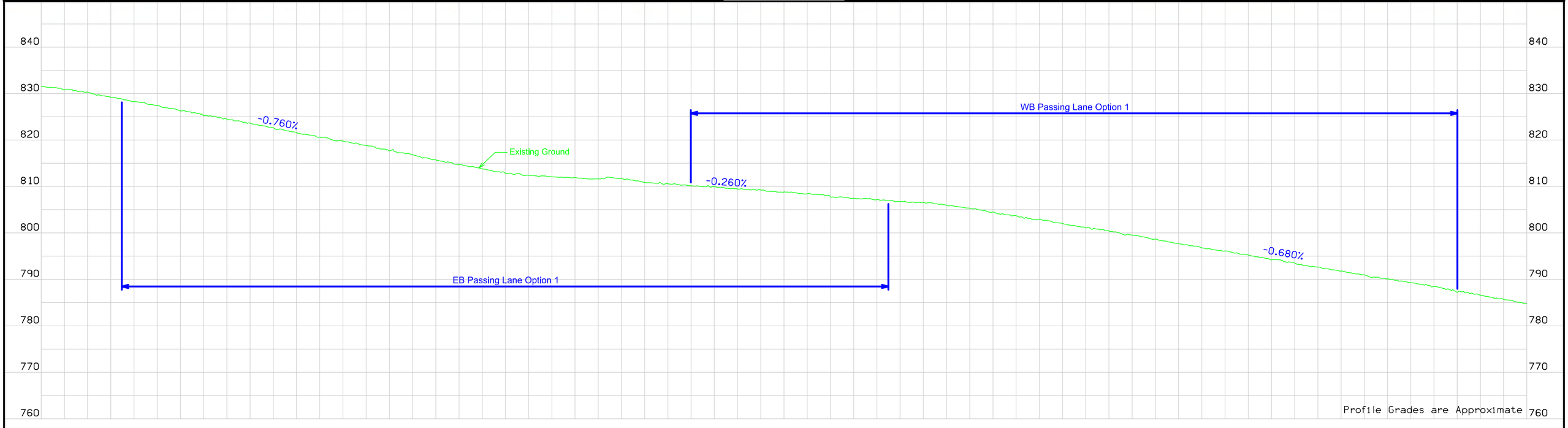

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Clarence to Lowden	Sheet 1 of 3

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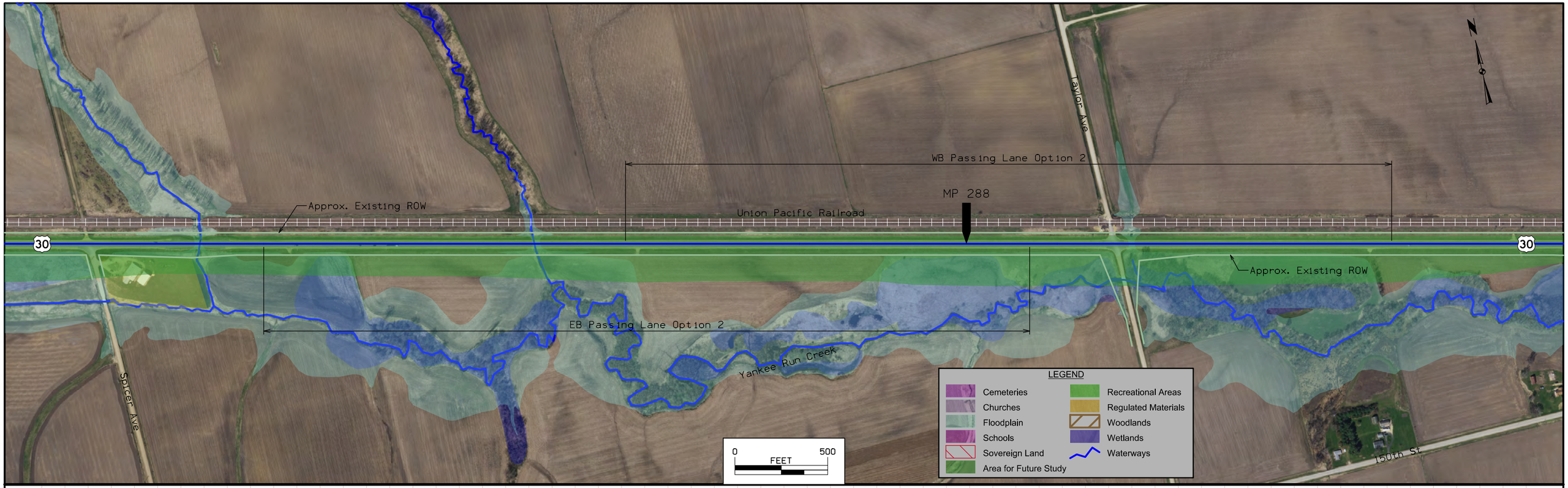

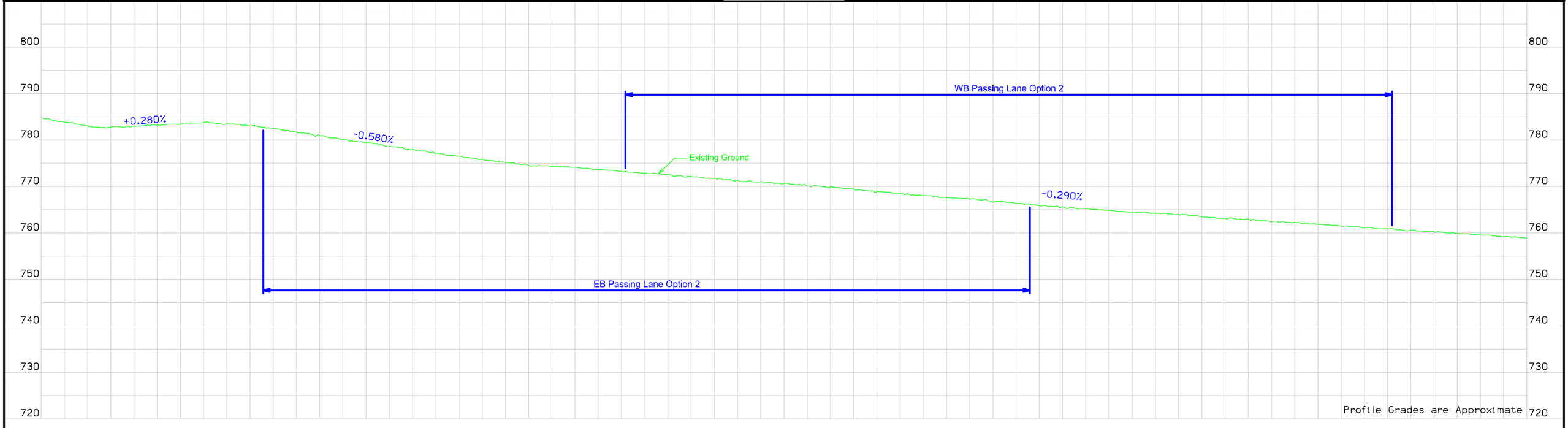

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Clarence to Lowden	Sheet 2 of 3

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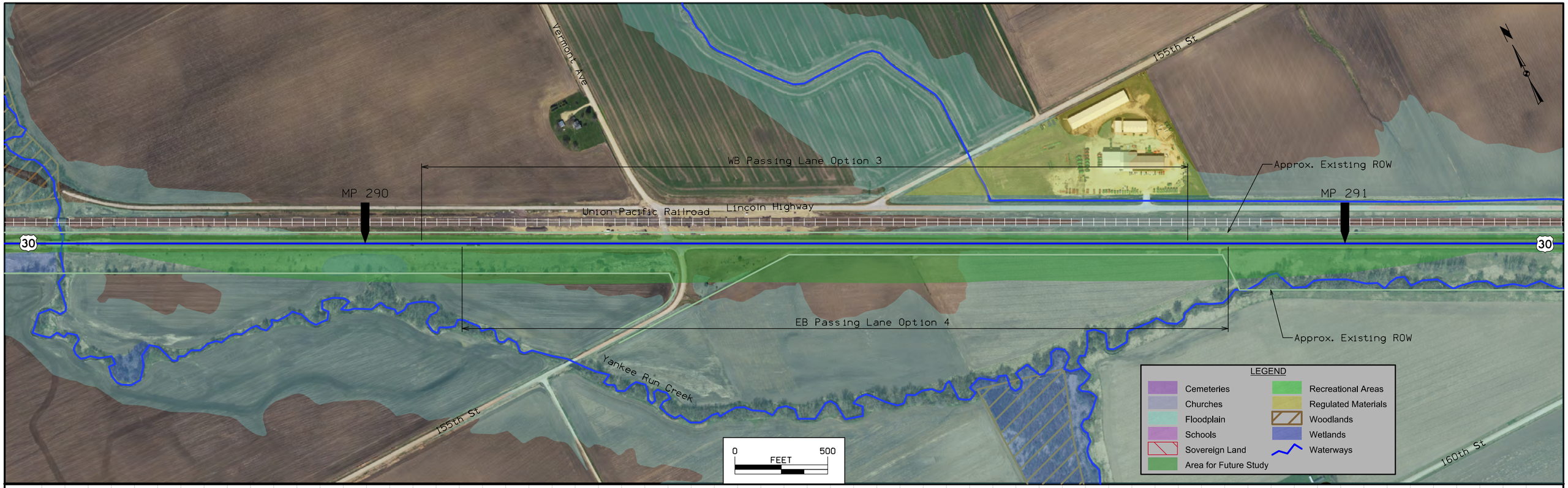

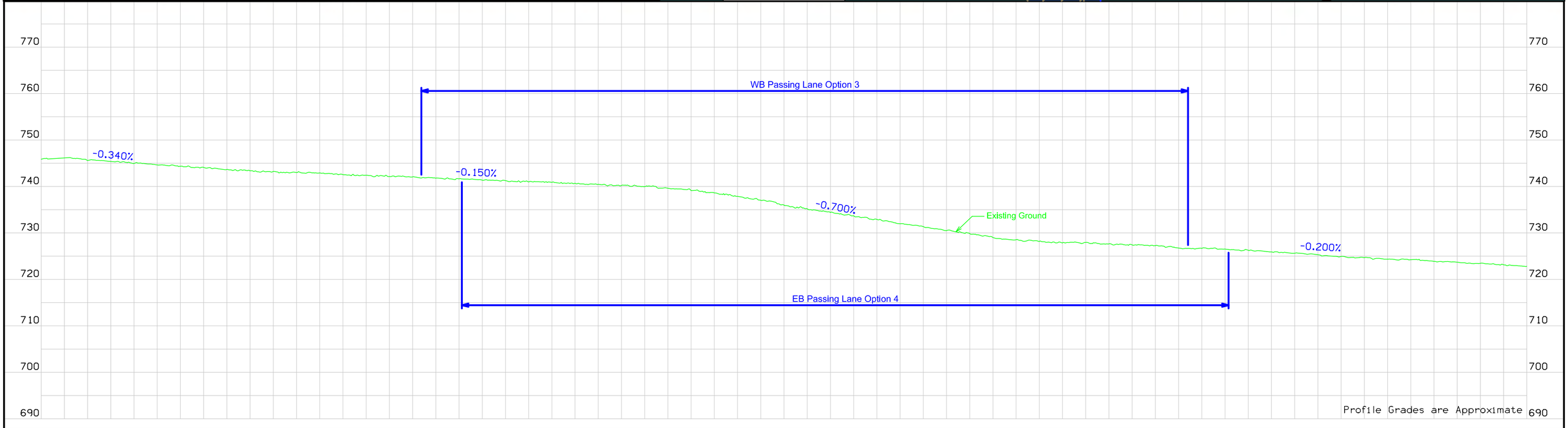

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Clarence to Lowden	Sheet 3 of 3

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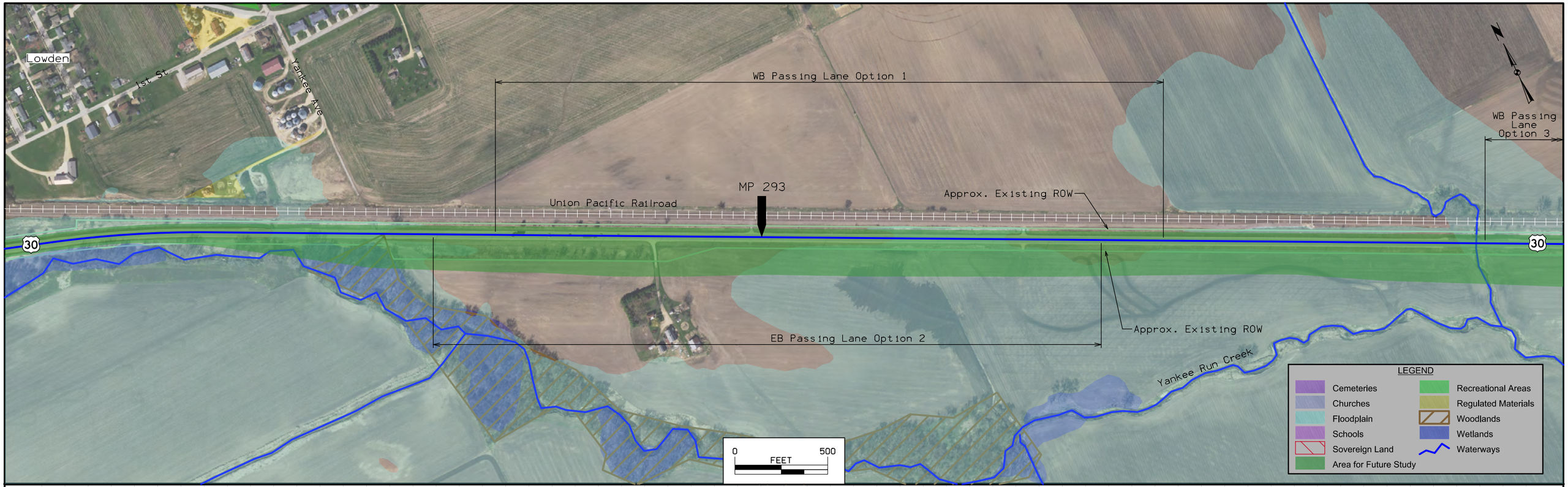

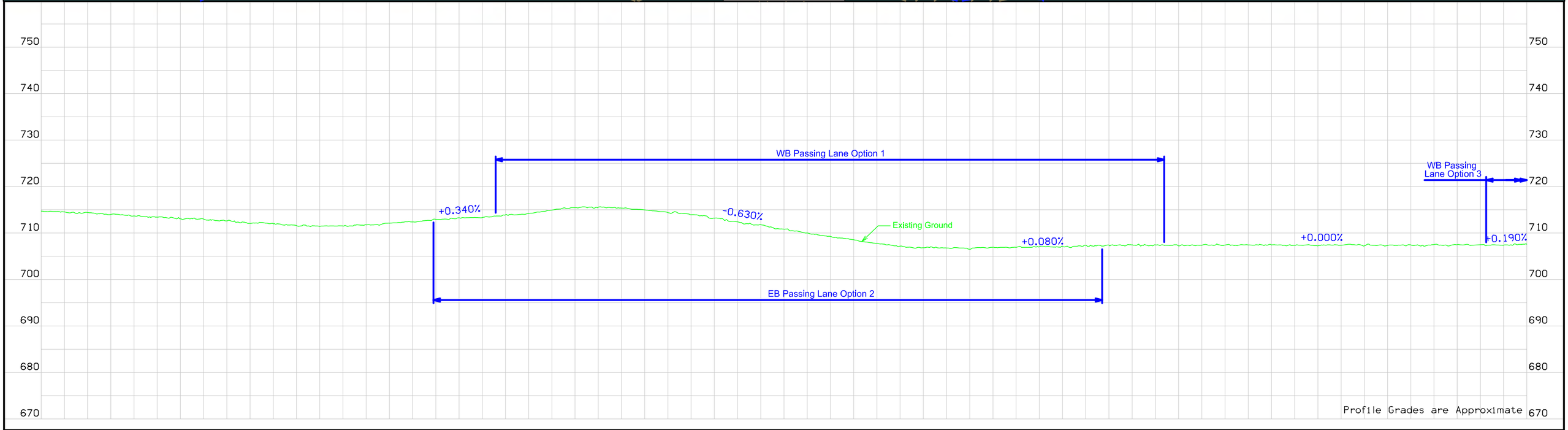

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Lowden to Wheatland	Sheet 1 of 3

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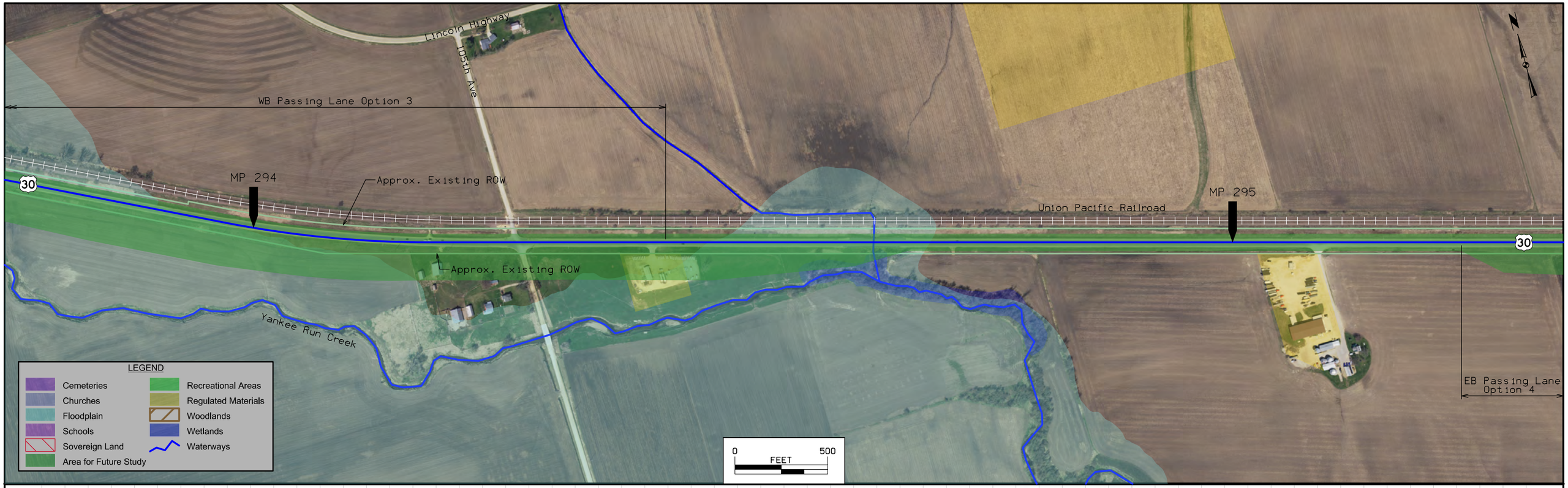

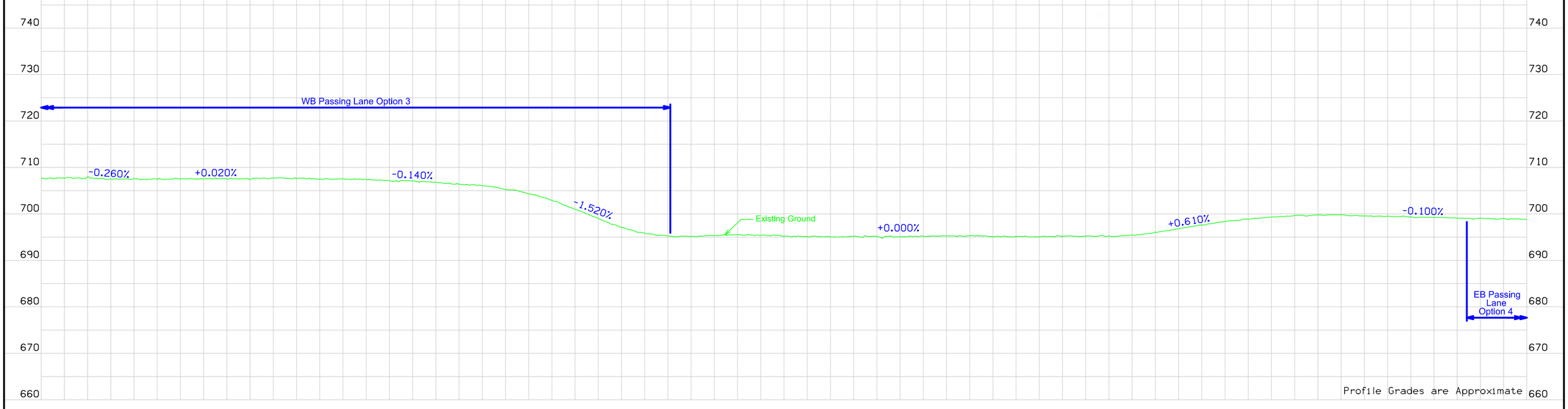

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Lowden to Wheatland	Sheet 2 of 3

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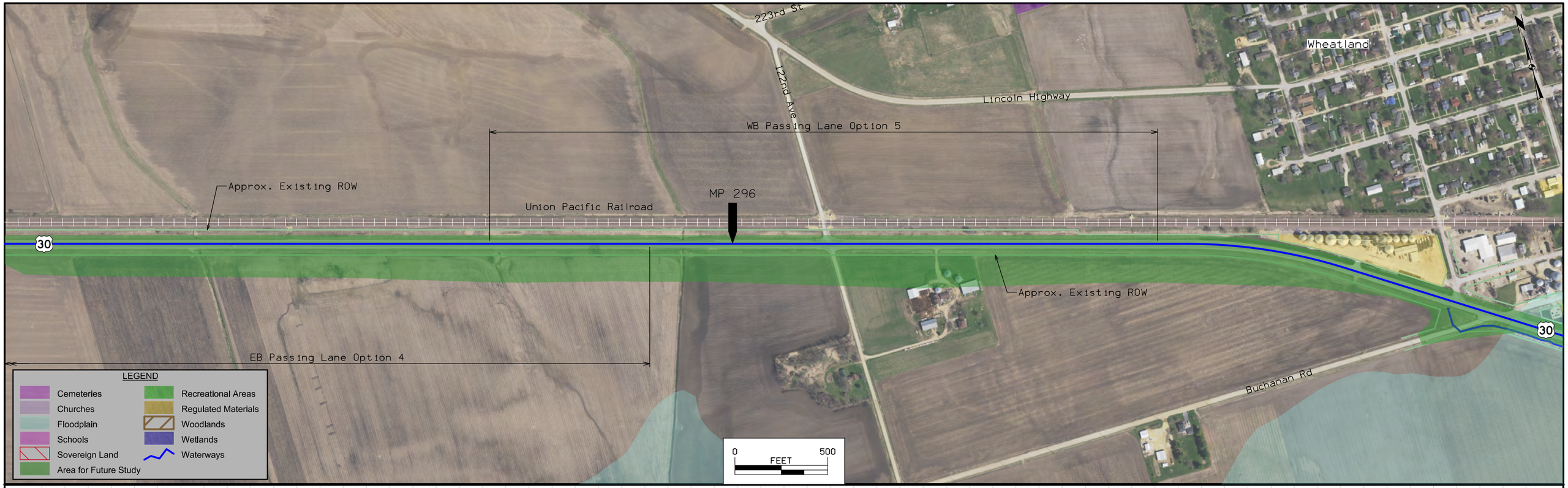

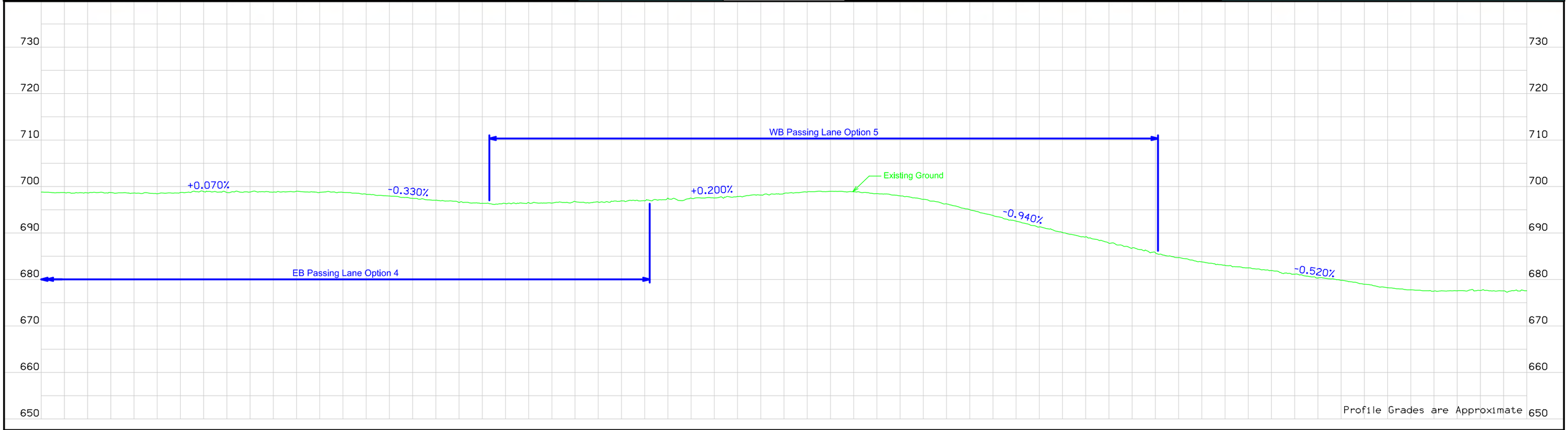

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Lowden to Wheatland	Sheet 3 of 3

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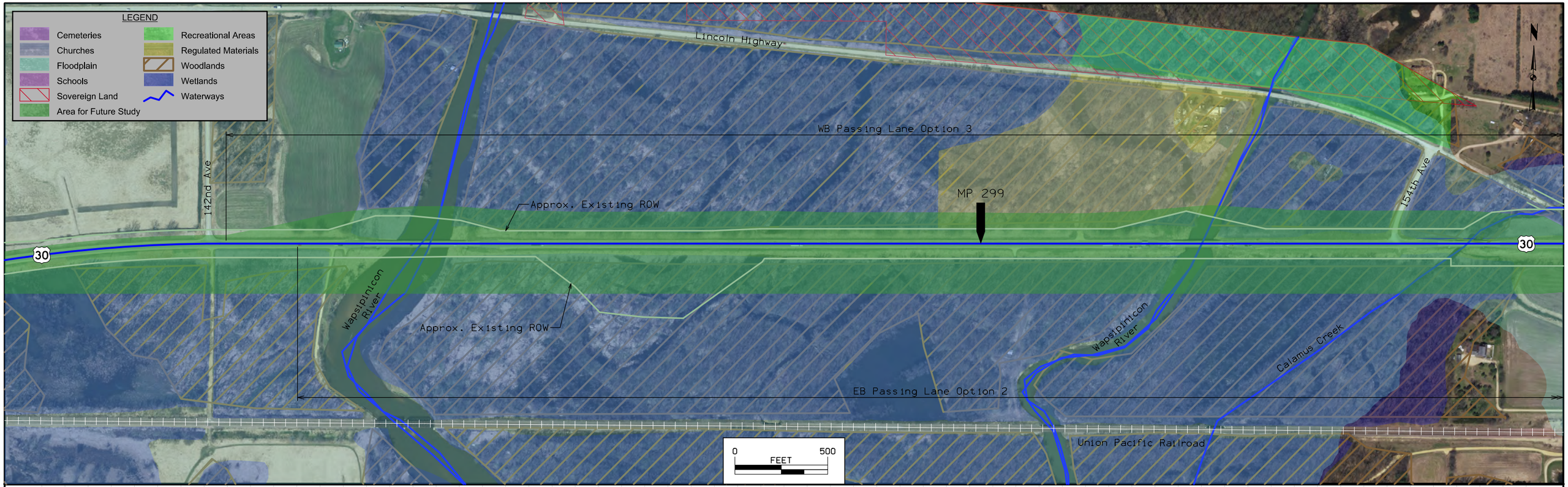

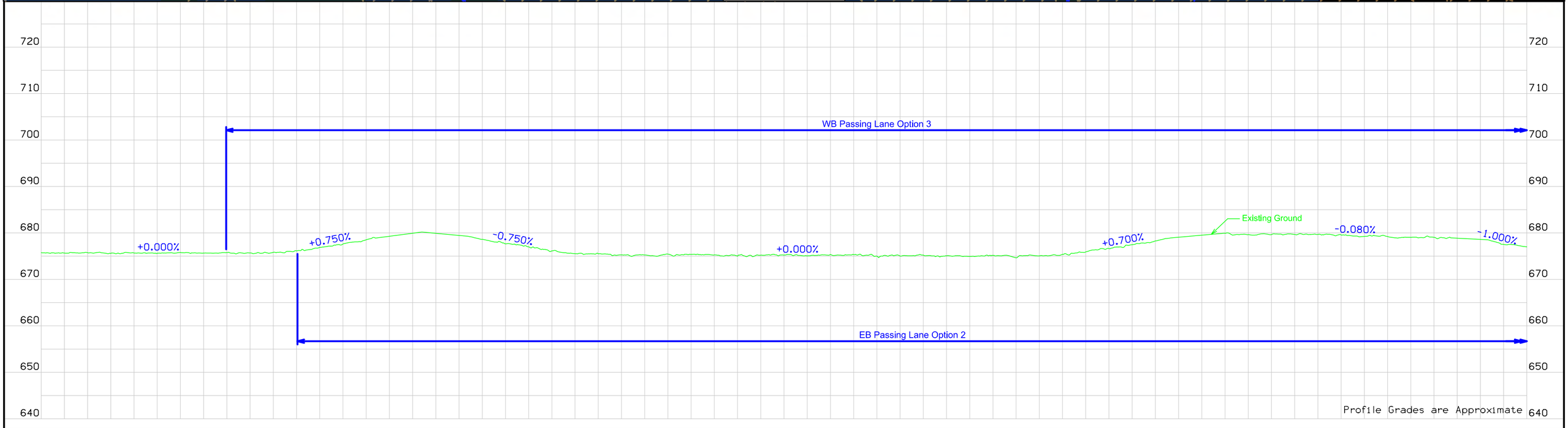

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Wheatland to Calamus	Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC

LEGEND

- Cemeteries
- Churches
- Floodplain
- Schools
- Sovereign Land
- Area for Future Study
- Recreational Areas
- Regulated Materials
- Woodlands
- Wetlands
- Waterways

WB Passing Lane Option 3

WB Passing Lane Option 4

MP 300

MP 301

Approx. Existing ROW

Approx. Existing ROW

Y-44/170th Ave

158th Ave

EB Passing Lane Option 2

EB Passing Lane Option 3

Davenport St

Winter St

1st St

Spring St

Calamus

Railroad St

Union Pacific Railroad

30

30

0 FEET 500

N

720
710
700
690
680
670
660
650
640

WB Passing Lane Option 3

WB Passing Lane Option 4

EB Passing Lane Option 2

EB Passing Lane Option 3

-0.550%

+0.000%

-0.230%

+0.950%

-0.490%

-0.013%

+0.210%

+1.160%

-0.260%

Existing Ground

Profile Grades are Approximate

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Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Wheatland to Calamus	Sheet 2 of 2

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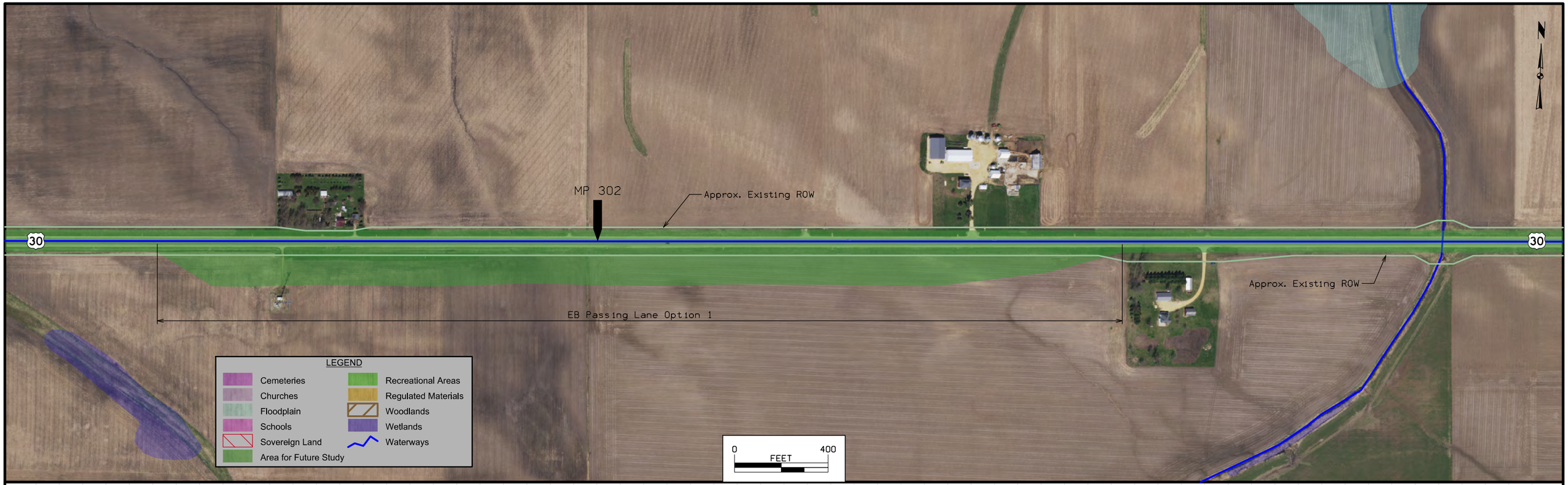

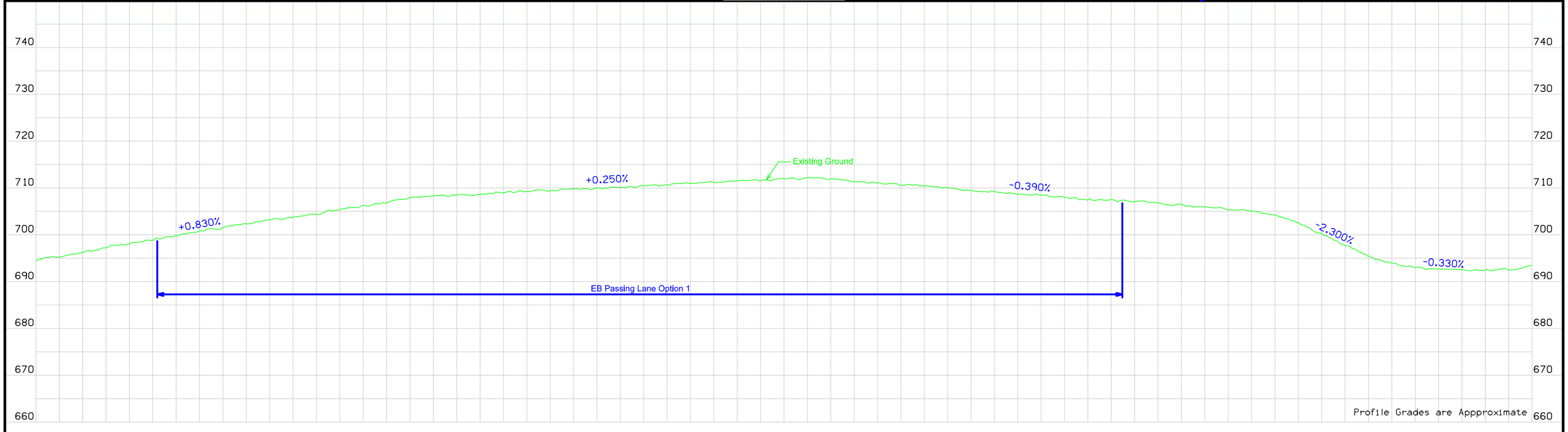

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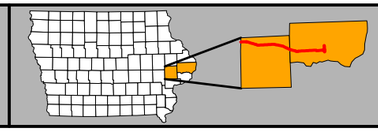

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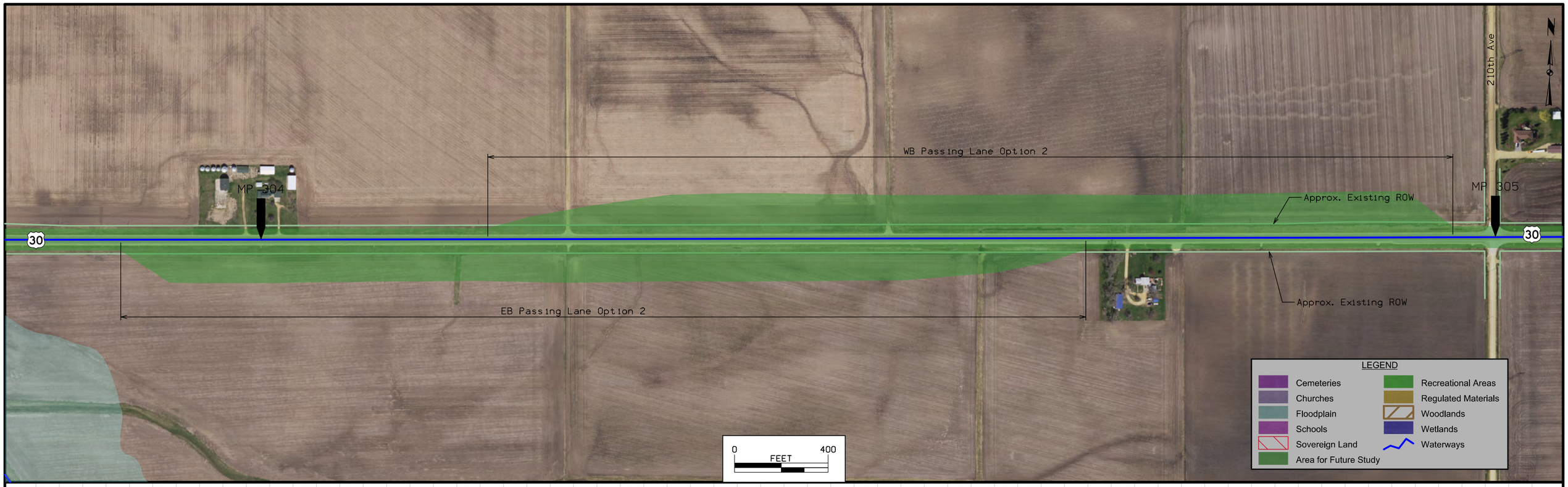
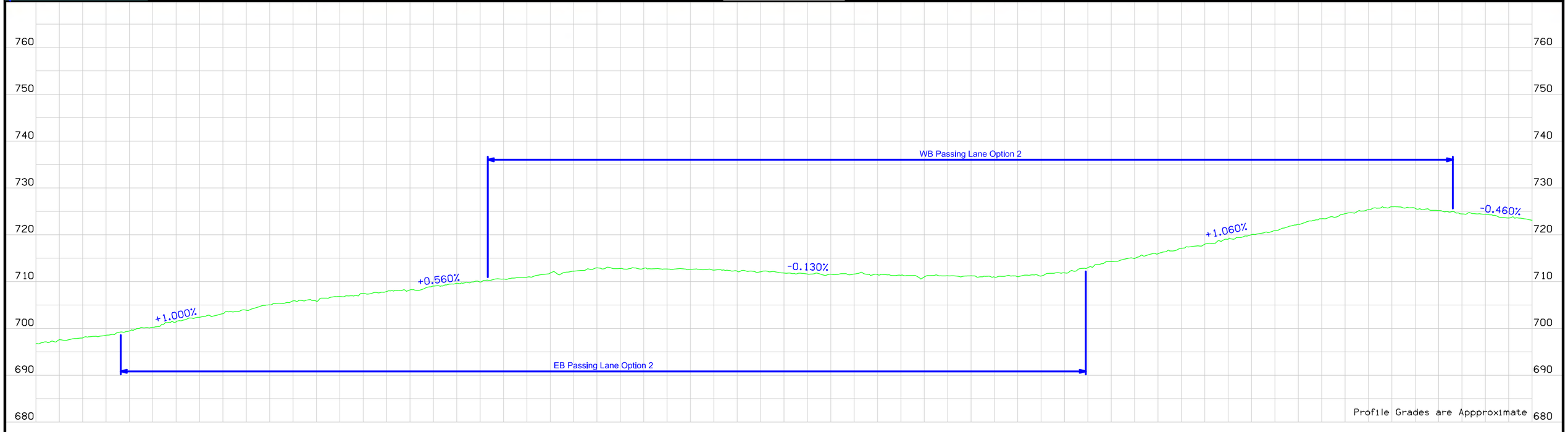
Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Calamus to Grand Mound	Sheet 1 of 3





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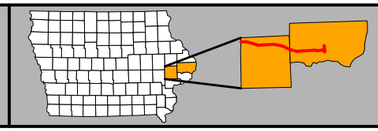
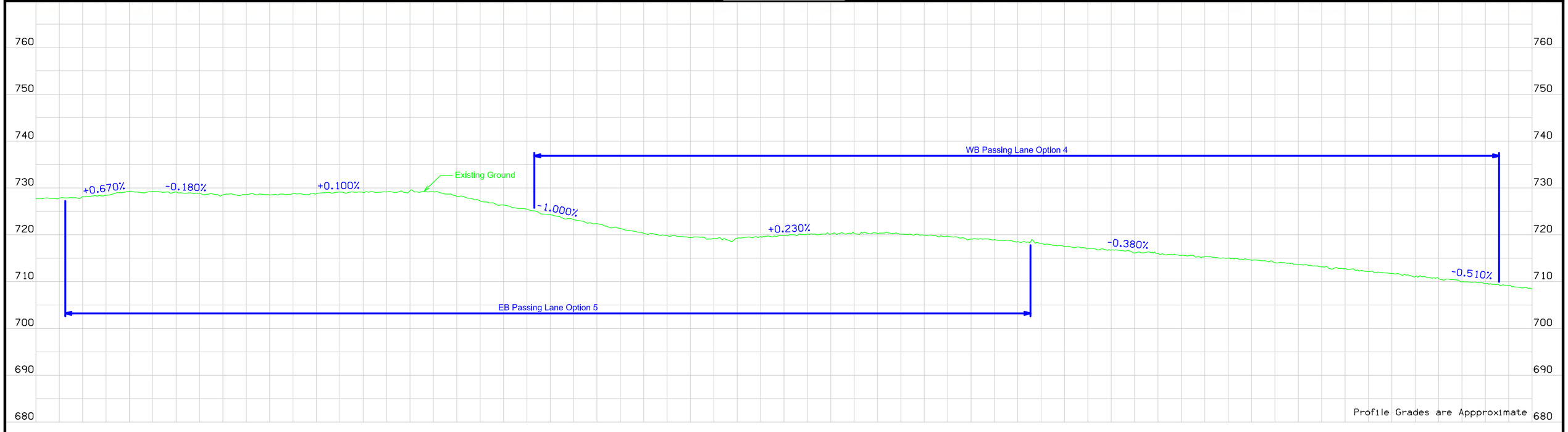


Jacobs

Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Calamus to Grand Mound	Sheet 2 of 3

SYSTEMTIME USERNAME DGNSPEC



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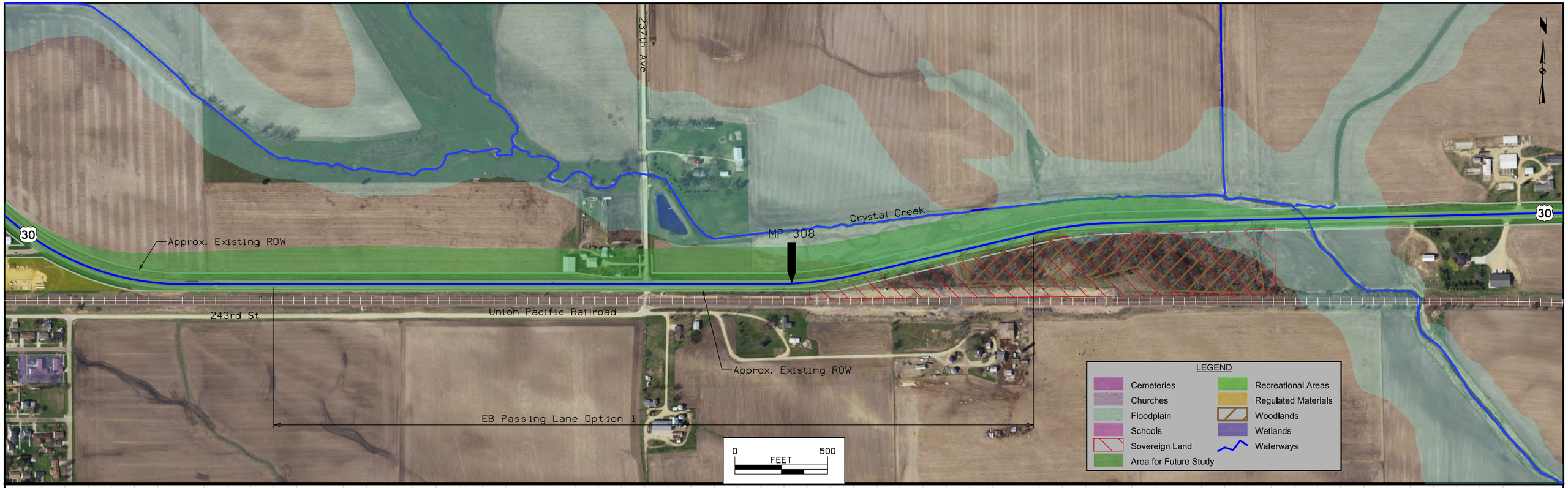
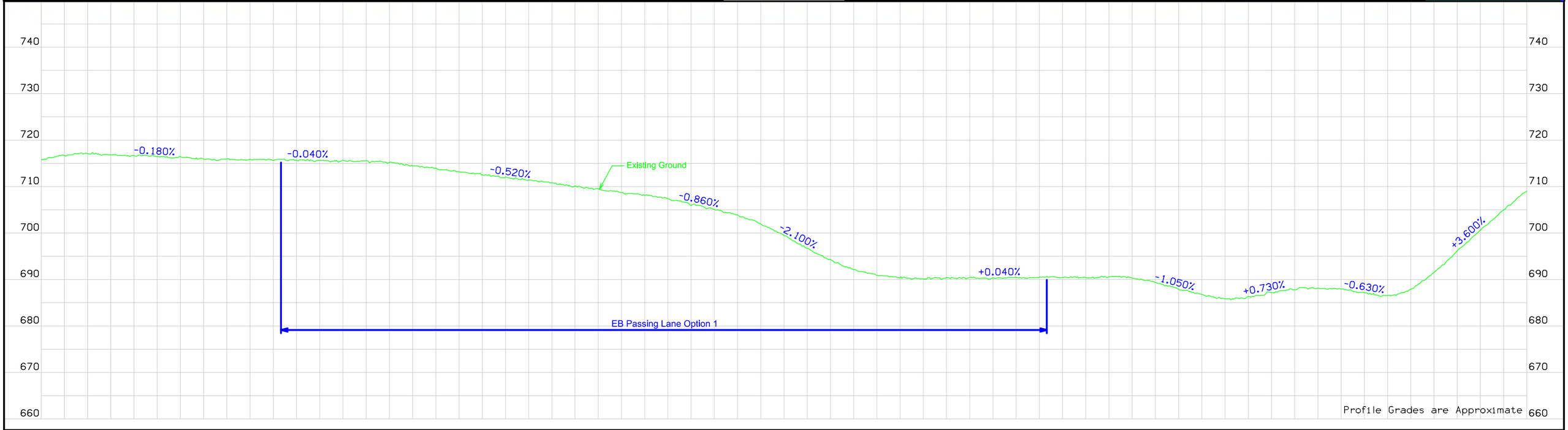
Jacobs

Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Calamus to Grand Mound	Sheet 3 of 3

SYSTEMTIME USERNAME DGNSPEC





IOWA DOT

Jacobs

Description	March 2020
US Highway 30 PEL Study Corridor Recommended Super Two Passing Lane Alternatives Grand Mound to East of Grand Mound	Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC

APPENDIX G
SUPER-2 HIGHWAY THREE-LANE ROADWAY ALTERNATIVES THROUGH LOCAL COMMUNITIES

MECHANICSVILLE

S. MADISON ST

EXISTING ROW

UNION PACIFIC RAILROAD

MP 274

30

30

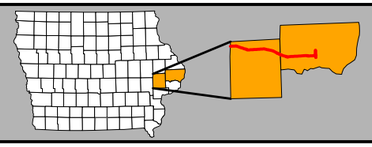
EXISTING ROW

FOX AVE/X-40

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT



Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 1

MARCH 2020

Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC

IOWA DOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 1

MARCH 2020

Sheet 2 of 2

SYSTEMTIME USERNAME DGNSPEC

MECHANICSVILLE

S MADISON ST

FOX AVE/X-40

EXISTING ROW

UNION PACIFIC RAILROAD

MP 274

EXISTING ROW

30

30

N

LEGEND

Cemeteries	Schools
Churches	Sovereign Land
Floodplain	Wetlands
Recreational Areas	Woodlands
Regulated Materials	Waterways

IOWADOT

Jacobs

0 FEET 200

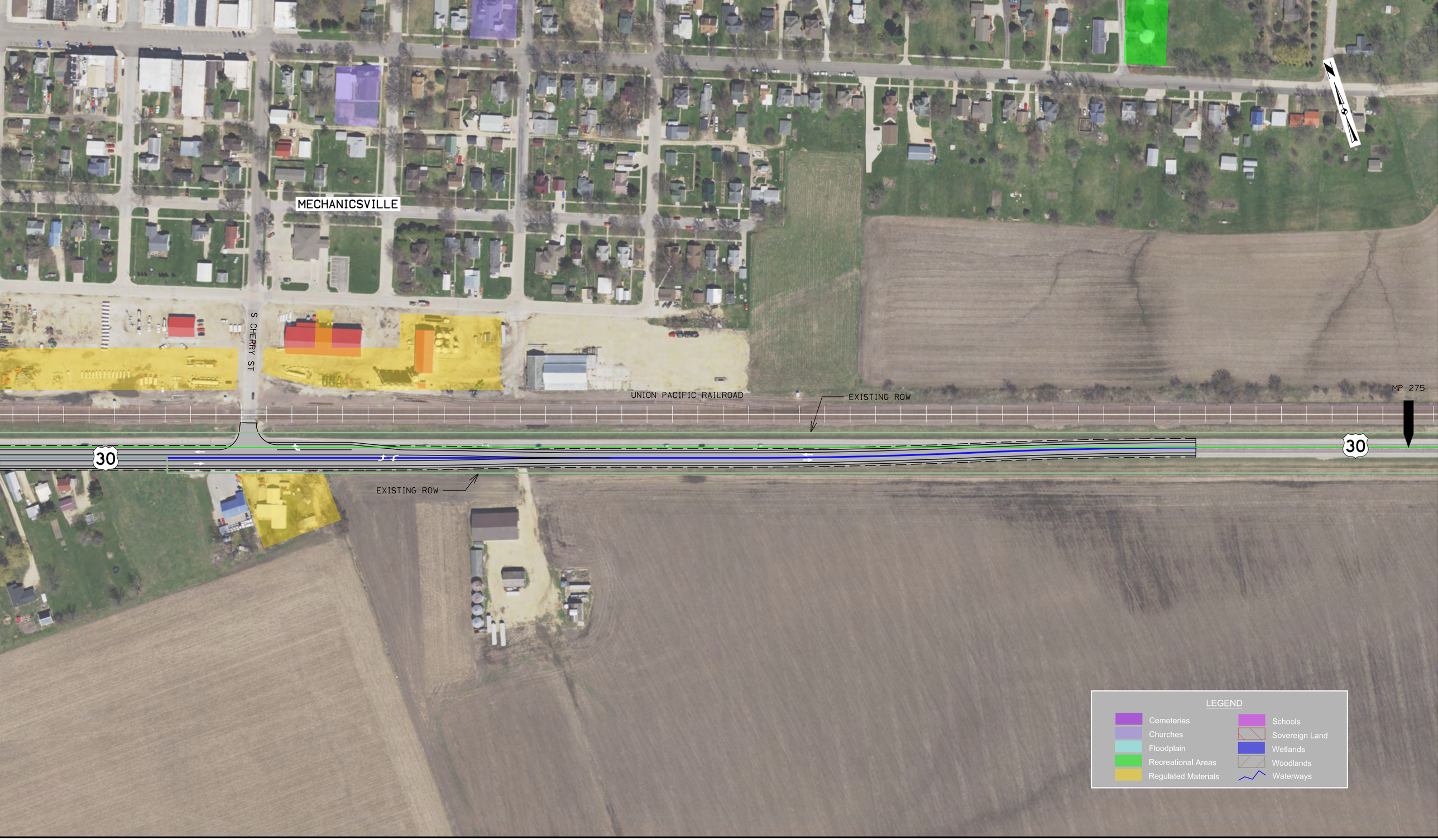
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 2

MARCH 2020

Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

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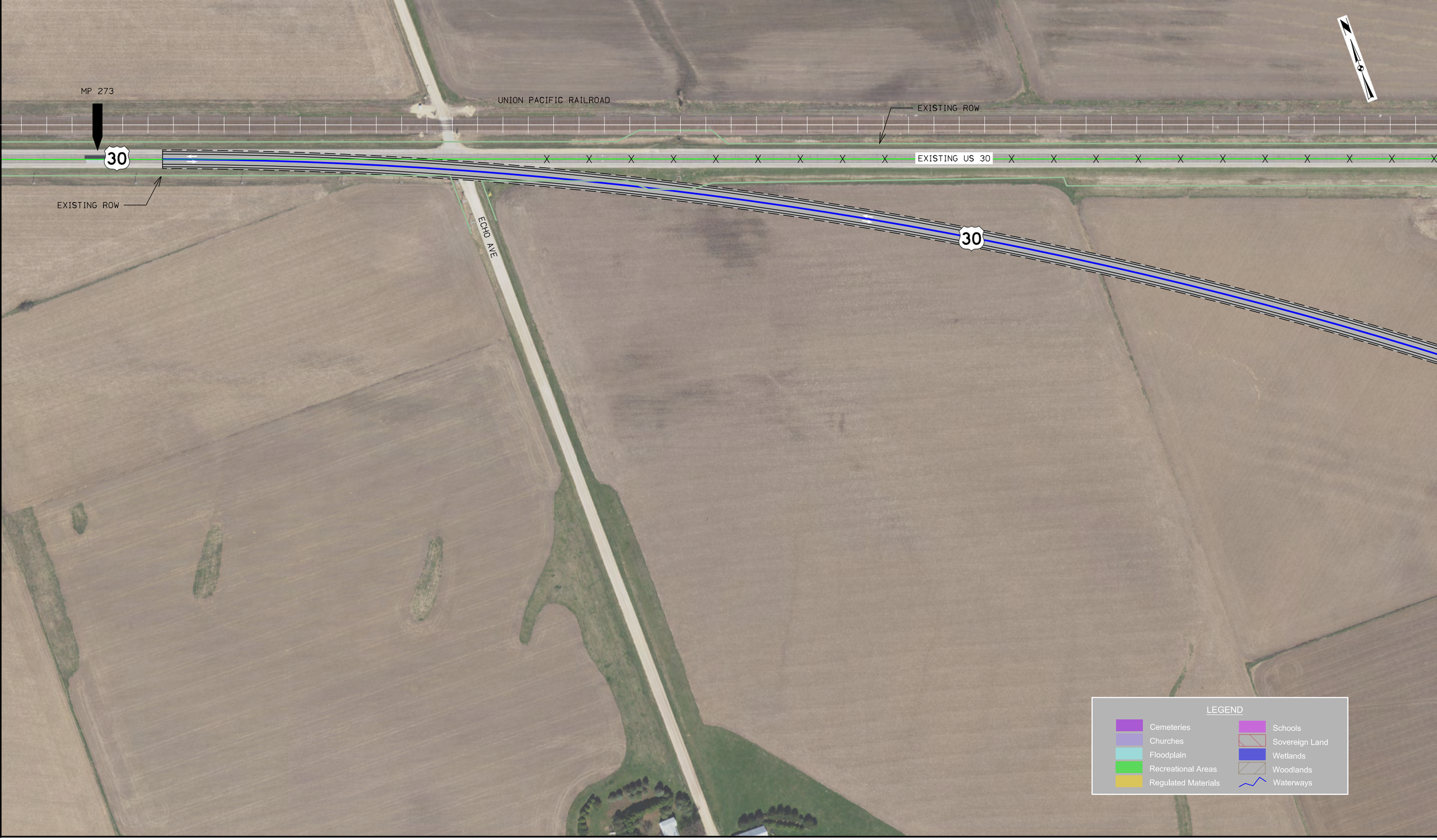
US Highway 30 PEL Study Corridor Super Two Passing Lane Alternatives Mechanicsville Alternative 2	Sheet 2 of 2

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 3

MARCH 2020

Sheet 1 of 4

SYSTEMTIME USERNAME DGNSPEC

UNION PACIFIC RAILROAD

EXISTING ROW

MP 274

MECHANICSVILLE

S MADISON ST

EXISTING US 30

EXISTING ROW

FRANKLIN AVE

30

30

30

N

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWA DOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 3

MARCH 2020

Sheet 2 of 4

SYSTEMTIME USERNAME DGNSPEC

MECHANICSVILLE

S CHERRY ST

UNION PACIFIC RAILROAD

EXISTING ROW

EXISTING US 30

30

EXISTING ROW

FOX AVE/X-40

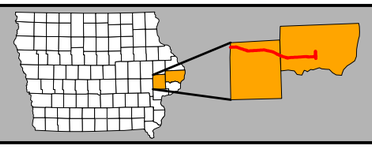
30

30

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWA DOT



Jacobs

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Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 3

MARCH 2020

Sheet 3 of 4

SYSTEMTIME USERNAME DGNSPEC

MP 275

EXISTING ROW

UNION PACIFIC RAILROAD

30

EXISTING US 30

30

EXISTING ROW

30

N

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWA DOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Mechanicsville Alternative 3

MARCH 2020

Sheet 4 of 4

SYSTEMTIME USERNAME DGNSPEC

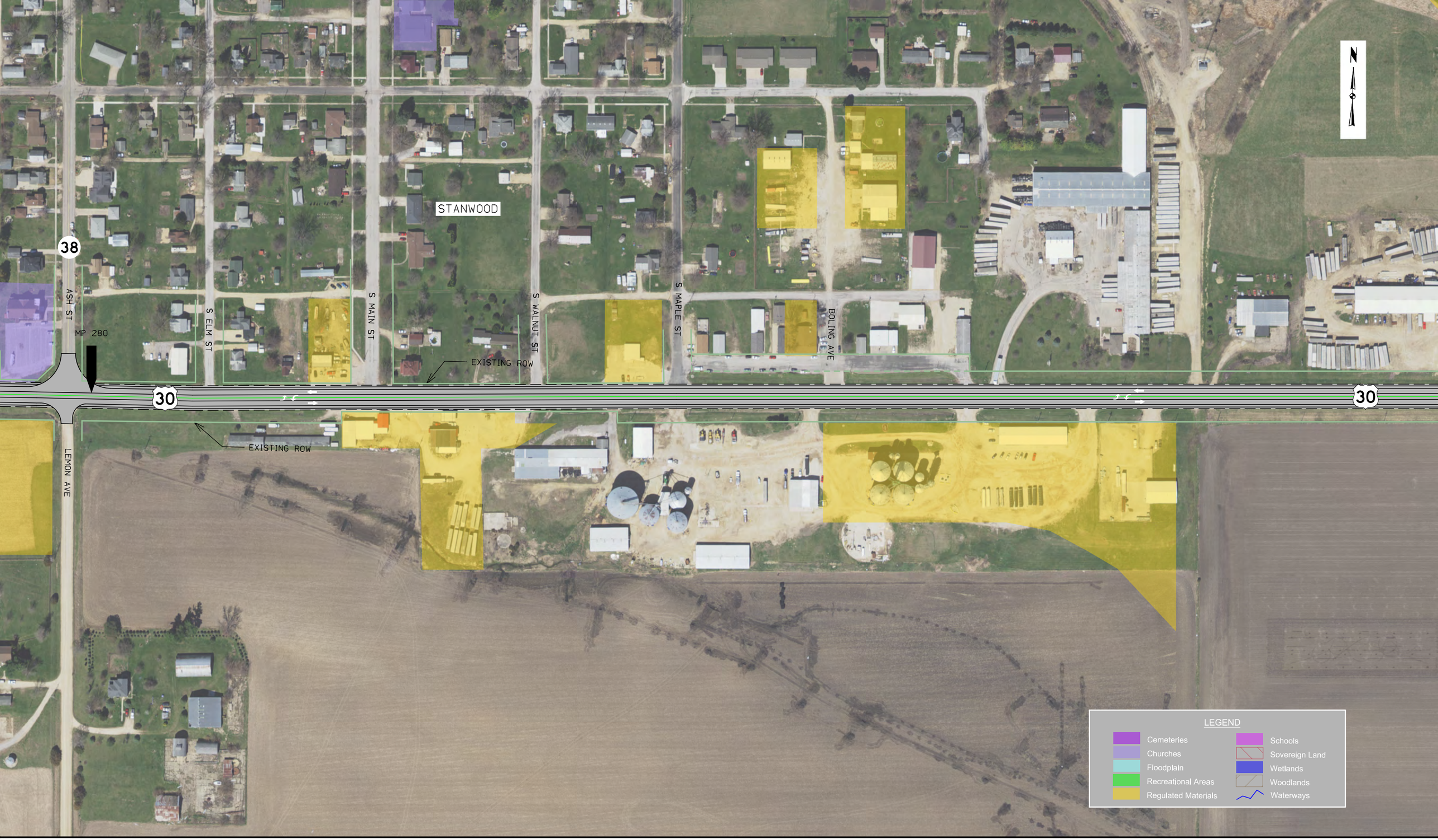
IOWADOT

Jacobs

0 FEET 200

Description	MARCH 2020
US Highway 30 PEL Study Corridor Super Two Passing Lane Alternatives Stanwood Alternative 1	Sheet 1 of 3

SYSTEMTIME USERNAME DGNSPEC



IOWA DOT

Jacobs

0 FEET 200

Description	MARCH 2020
US Highway 30 PEL Study Corridor Super Two Passing Lane Alternatives Stanwood Alternative 1	Sheet 2 of 3

SYSTEMTIME USERNAME DGNSPEC

FOREST ST

EXISTING ROW

30

EXISTING ROW

MONROE AVE

MP 281

30

38

N

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Stanwood Alternative 1

MARCH 2020

Sheet 3 of 3

SYSTEMTIME USERNAME DGNSPEC

STANWOOD

ROCK CREEK

EXISTING ROW

EXISTING ROW

30

30

38

MP 280

ASH ST

1ST AVE

S ELM ST

KING AVE

LEMON AVE

ROCK CREEK

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT

Jacobs

0 FEET 200

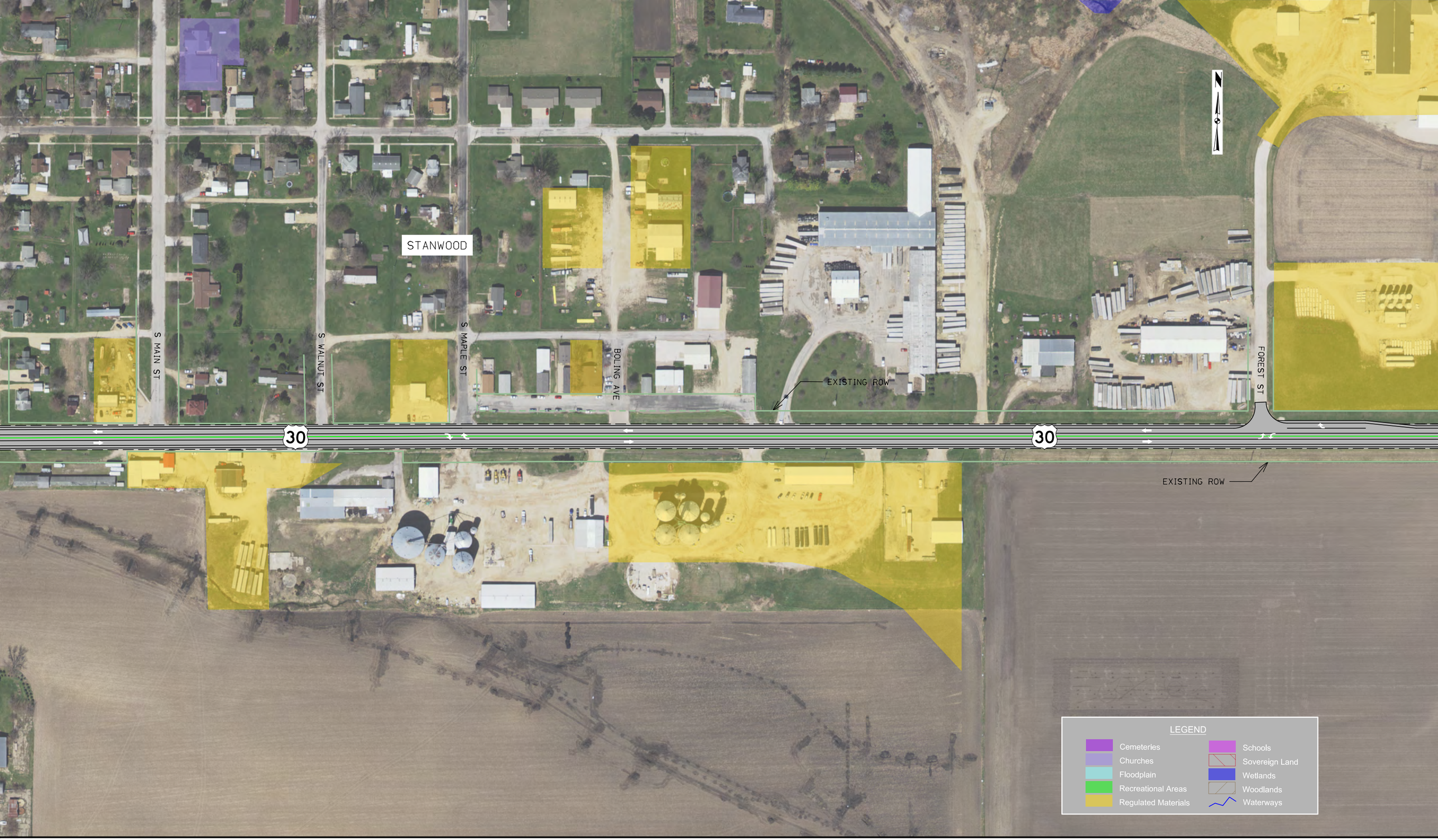
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Stanwood Alternative 2

MARCH 2020

Sheet 1 of 3

SYSTEMTIME USERNAME DGNSPEC



IOWA DOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Stanwood Alternative 2

MARCH 2020

Sheet 2 of 3

SYSTEMTIME USERNAME DGNSPEC

MONROE AVE

EXISTING ROW

MP 281

30

30

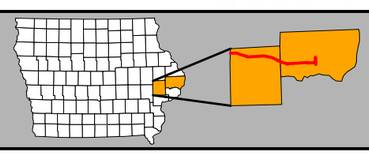
38

EXISTING ROW

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT



Jacobs

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Description

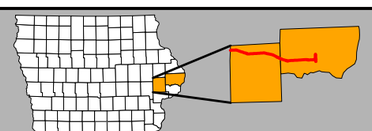
US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Stanwood Alternative 2

MARCH 2020

Sheet 3 of 3

SYSTEMTIME USERNAME DGNSPEC

IOWADOT



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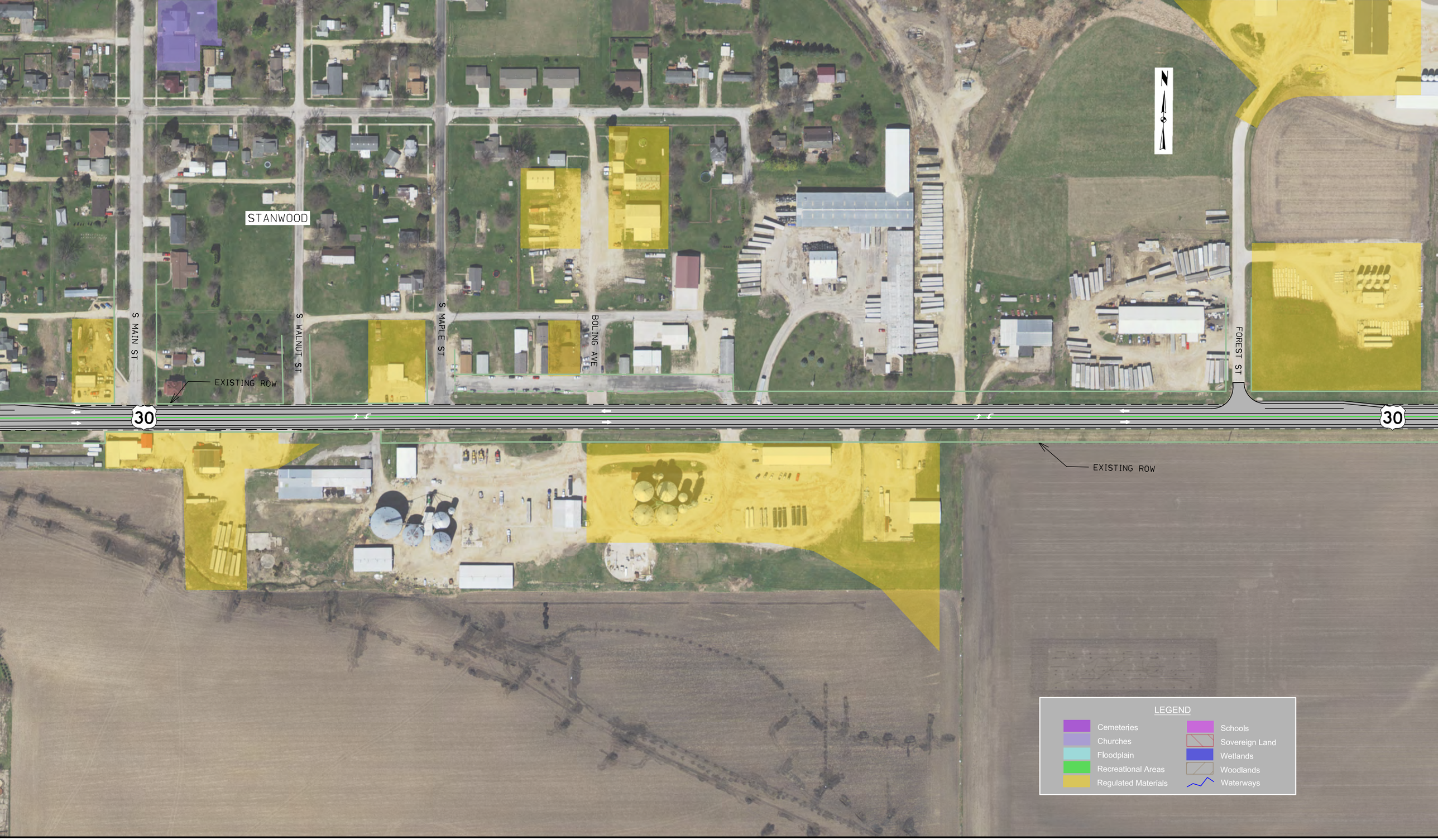
Description	MARCH 2020
US Highway 30 PEL Study Corridor Super Two Passing Lane Alternatives Stanwood Alternative 3	Sheet 1 of 3

SYSTEMTIME USERNAME DGNSPEC



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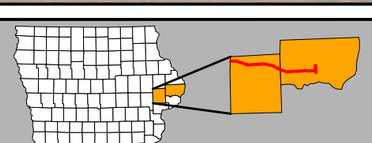


Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Stanwood Alternative 3

MARCH 2020

Sheet 2 of 3

SYSTEMTIME USERNAME DGNSPEC

MONROE AVE

MP 281

EXISTING ROW

30

30

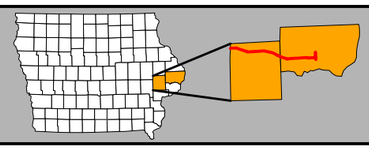
EXISTING ROW

38

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT



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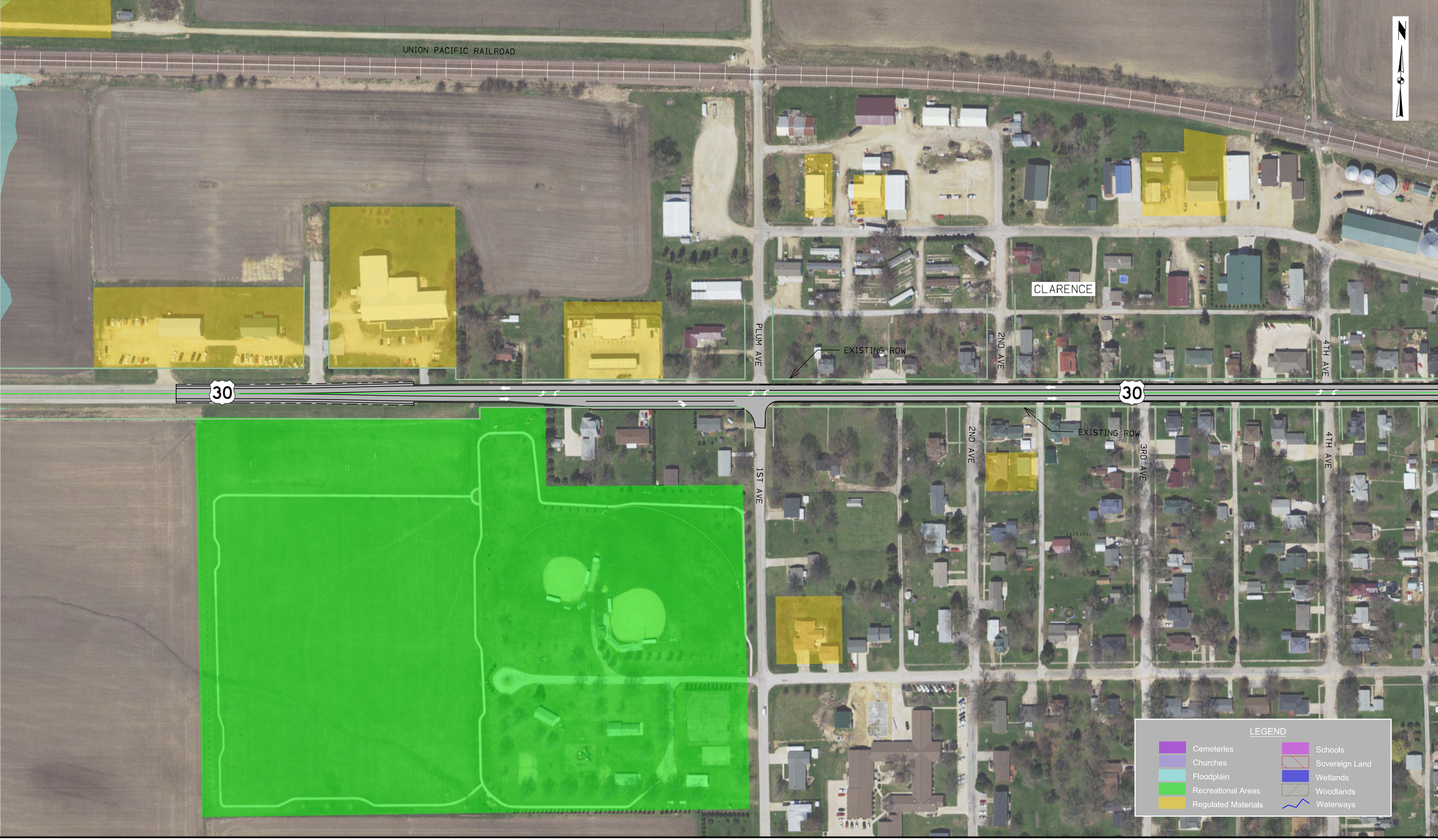
US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Stanwood Alternative 3

MARCH 2020

Sheet 3 of 3

SYSTEMTIME USERNAME DGNSPEC



IOWA DOT

Jacobs

0 FEET 200

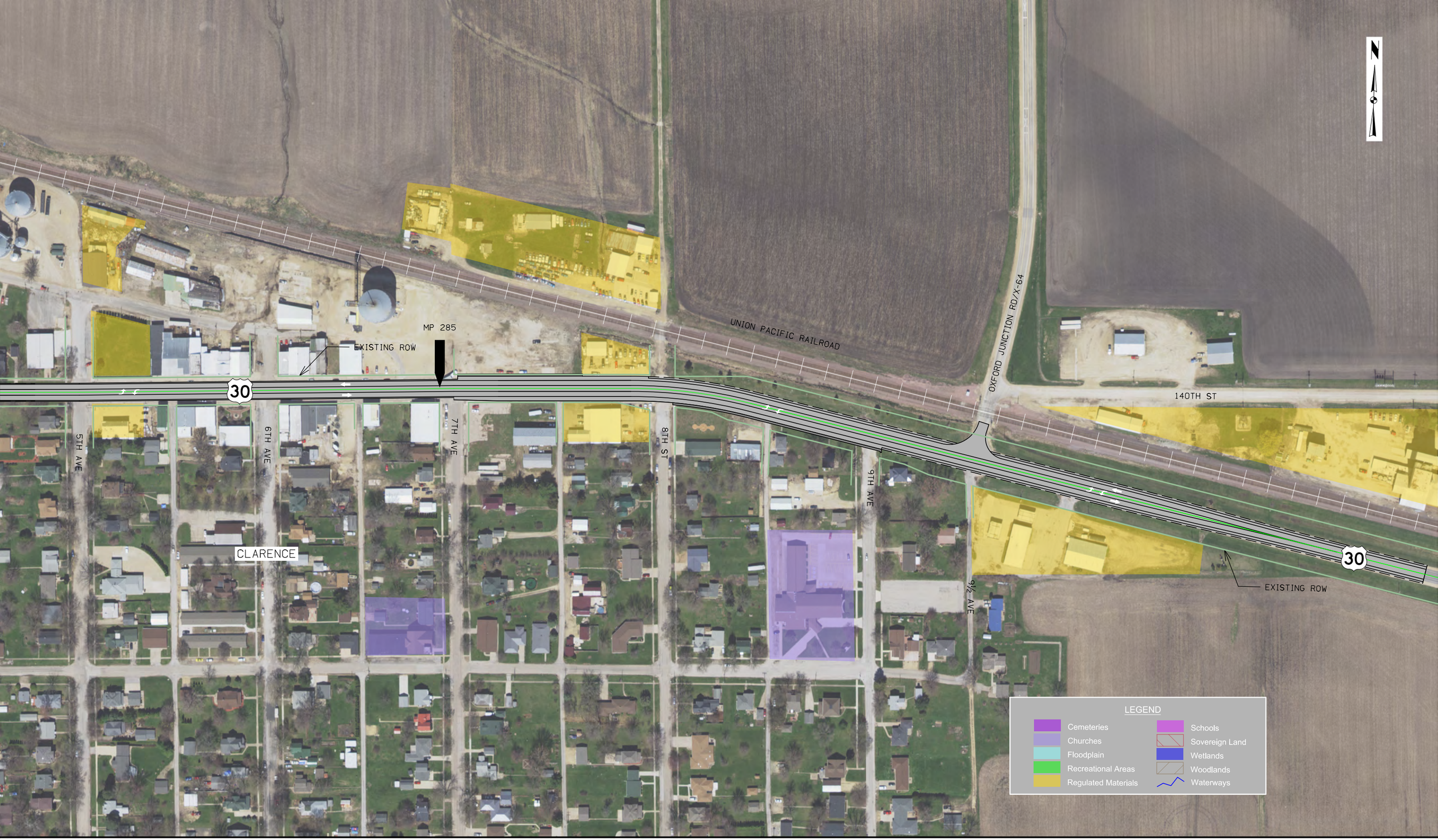
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Clarence Alternative 1

MARCH 2020

Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Clarence Alternative 1

MARCH 2020

Sheet 2 of 2

SYSTEMTIME USERNAME DGNSPEC

UNION PACIFIC RAILROAD

CLARENCE

PLUM AVE

1ST AVE

2ND AVE

2ND AVE

3RD AVE

EXISTING ROW

EXISTING ROW

30

30

LEGEND

Cemeteries	Schools
Churches	Sovereign Land
Floodplain	Wetlands
Recreational Areas	Woodlands
Regulated Materials	Waterways

IOWADOT

Jacobs

0 FEET 200

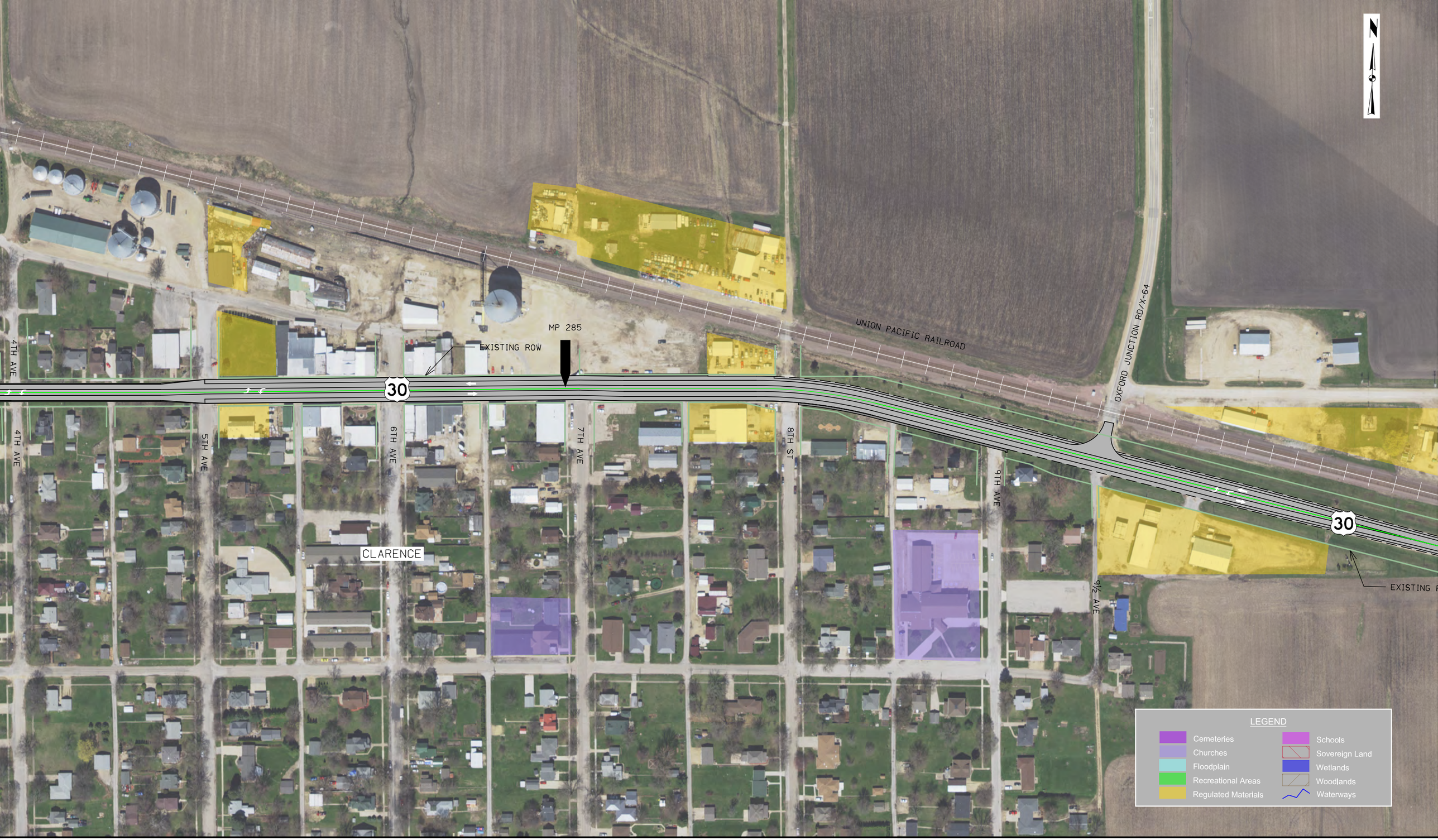
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Clarence Alternative 2

MARCH 2020

Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Clarence Alternative 2

MARCH 2020

Sheet 2 of 2

SYSTEMTIME USERNAME DGNSPEC

UNION PACIFIC RAILROAD

CLARENCE

PLUM AVE

1ST AVE

2ND AVE

2ND AVE

3RD AVE

EXISTING ROW

EXISTING ROW

30

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT

Jacobs

0 FEET 200

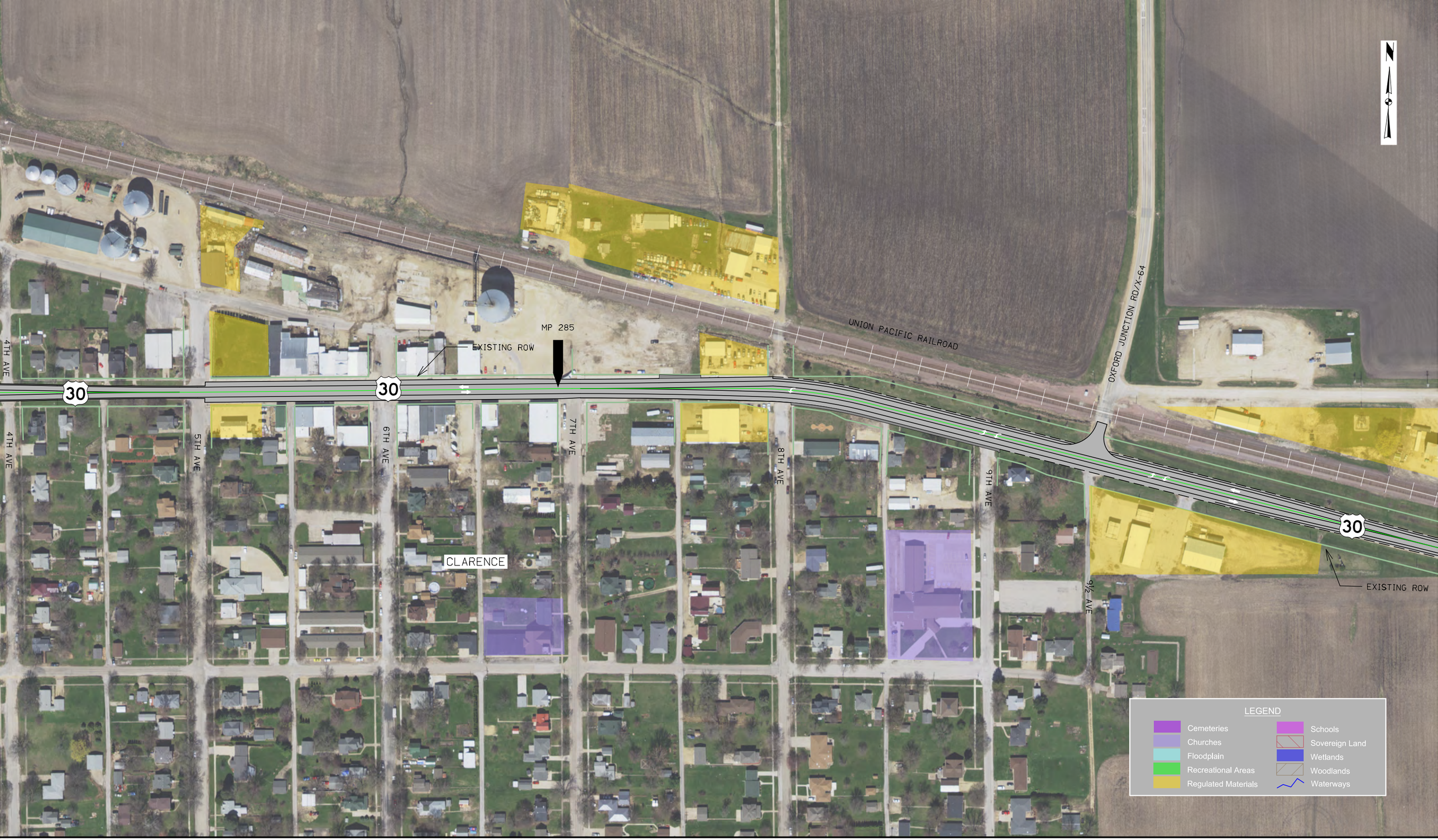
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Clarence Alternative 3

MARCH 2020

Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Clarence Alternative 3

MARCH 2020

Sheet 2 of 2

SYSTEMTIME USERNAME DGNSPEC

UNION PACIFIC RAILROAD

30

160TH ST

YANKEE RUN CREEK

EXISTING ROW

EXISTING ROW

LOWDEN

HARDING AVE

30

N

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Lowden Alternative 1

MARCH 2020

Sheet 1 of 2

SYSTEMTIME USERNAME DGNSPEC

LOWDEN

WASHINGTON AVE/Y-24

UNION PACIFIC RAILROAD

MP 292

EXISTING ROW

EXISTING ROW

30

30

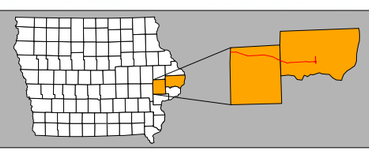
HOOVER HWY/Y-14

YANKEE RUN CREEK

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT



Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Lowden Alternative 1

MARCH 2020

Sheet 2 of 2

SYSTEMTIME USERNAME DGNSPEC

LOWDEN

UNION PACIFIC RAILROAD

WASHINGTON AVE/Y-24

HARDING AVE

MP 292

EXISTING ROW

EXISTING ROW

30

30

HOOVER HWY/Y-14

YANKEE RUN CREEK

LEGEND

- Cemeteries
- Churches
- Floodplain
- Recreational Areas
- Regulated Materials
- Schools
- Sovereign Land
- Wetlands
- Woodlands
- Waterways

IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Lowden Alternative 2

MARCH 2020

Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC

IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Wheatland Alternative 1

MARCH 2020

Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC

UNION PACIFIC RAILROAD

WHEATLAND

S WILLIAMS ST

W BUCHANAN ST

S TORONTO ST

30

MP 297

EXISTING ROW

EXISTING ROW

BUCHANAN RD

130TH AVE/Y-4E

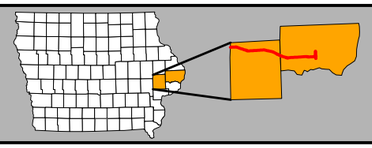
YANKEE RUN CREEK

30

LEGEND

Cemeteries	Schools
Churches	Sovereign Land
Floodplain	Wetlands
Recreational Areas	Woodlands
Regulated Materials	Waterways

IOWADOT



Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Wheatland Alternative 2

MARCH 2020

Sheet 1 of 1

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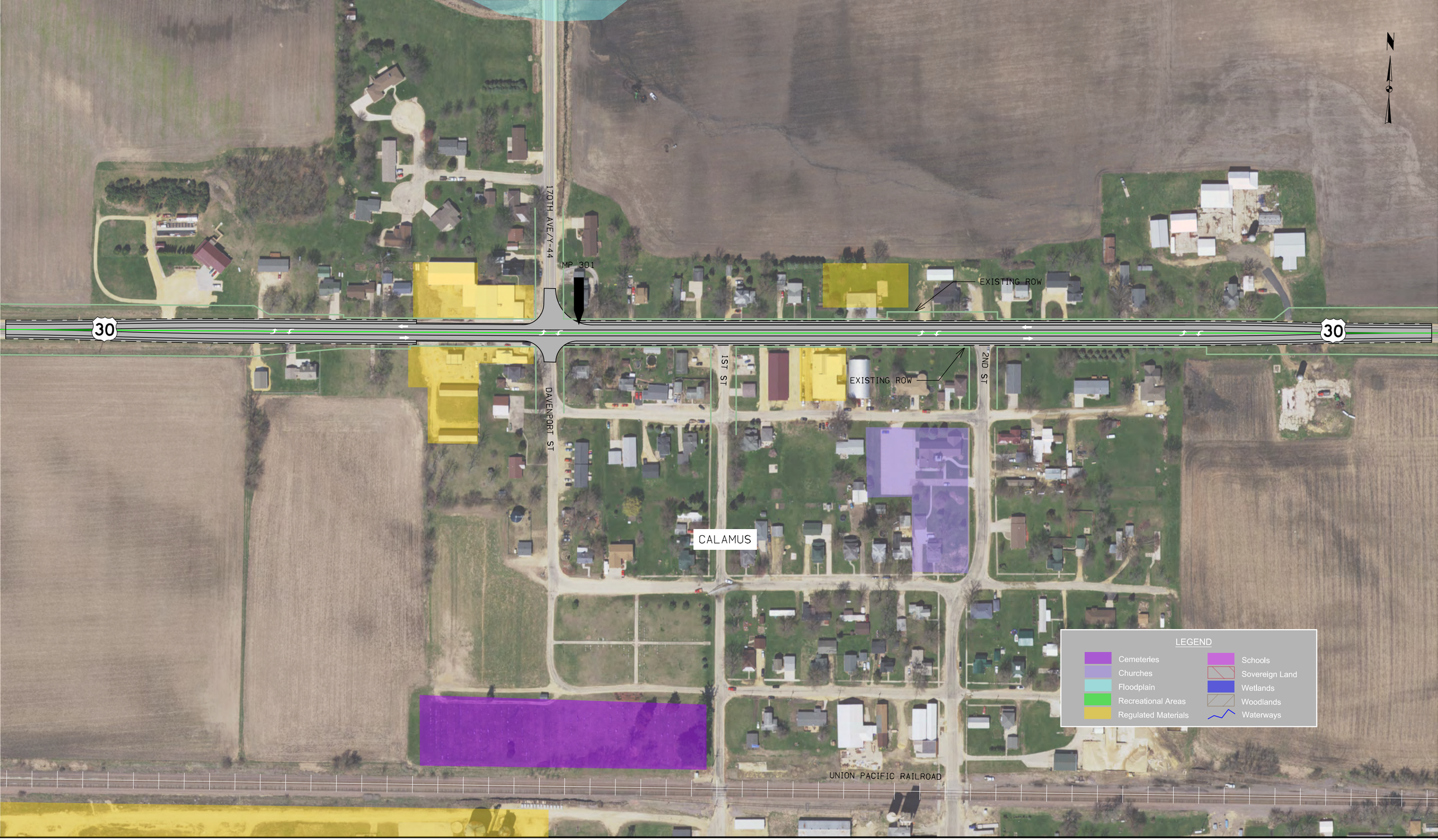


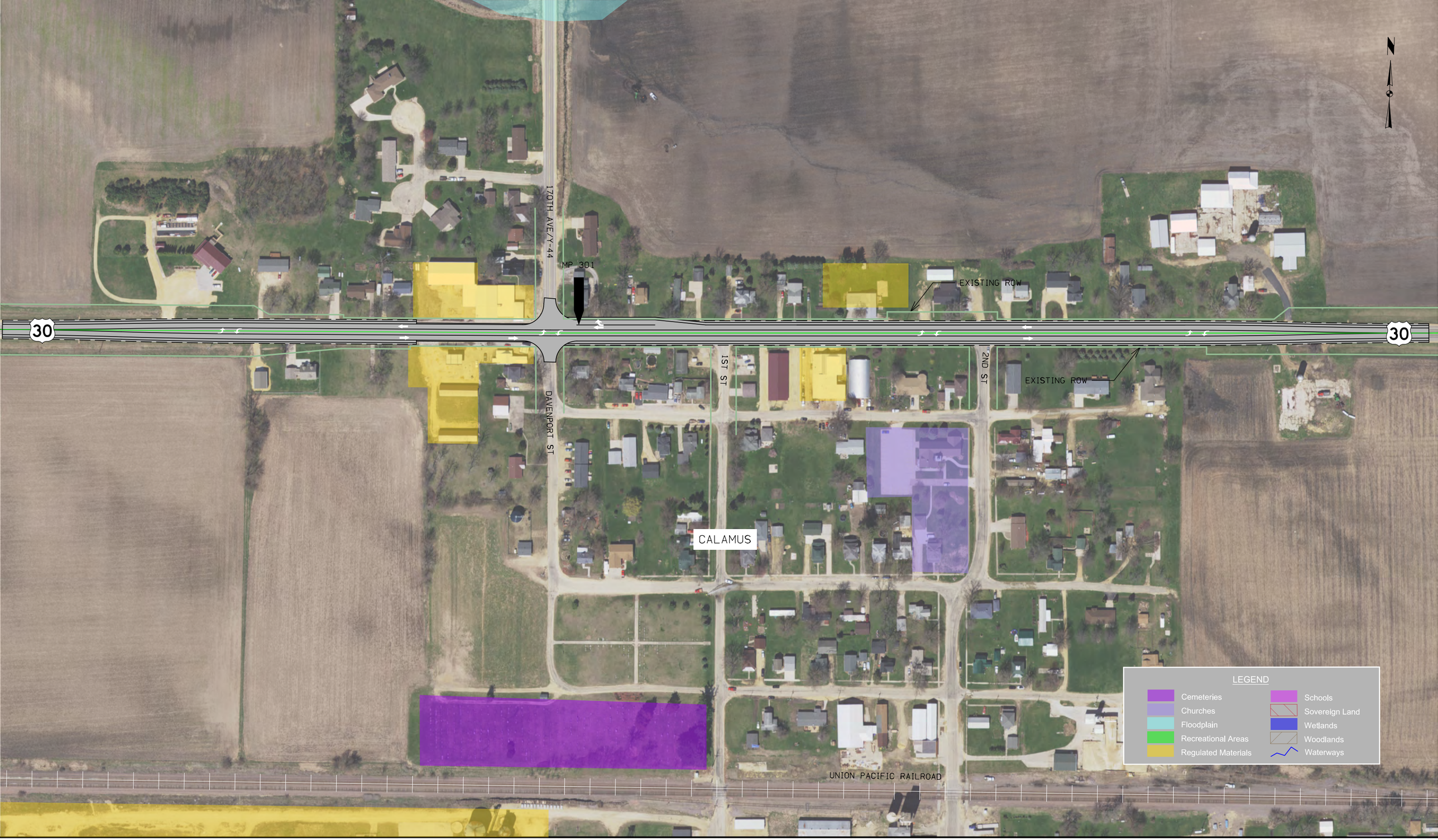
IOWADOT

Jacobs

0 FEET 200

Description	MARCH 2020
US Highway 30 PEL Study Corridor Super Two Passing Lane Alternatives Calamus Alternative 1	Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC



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Jacobs

0 FEET 200

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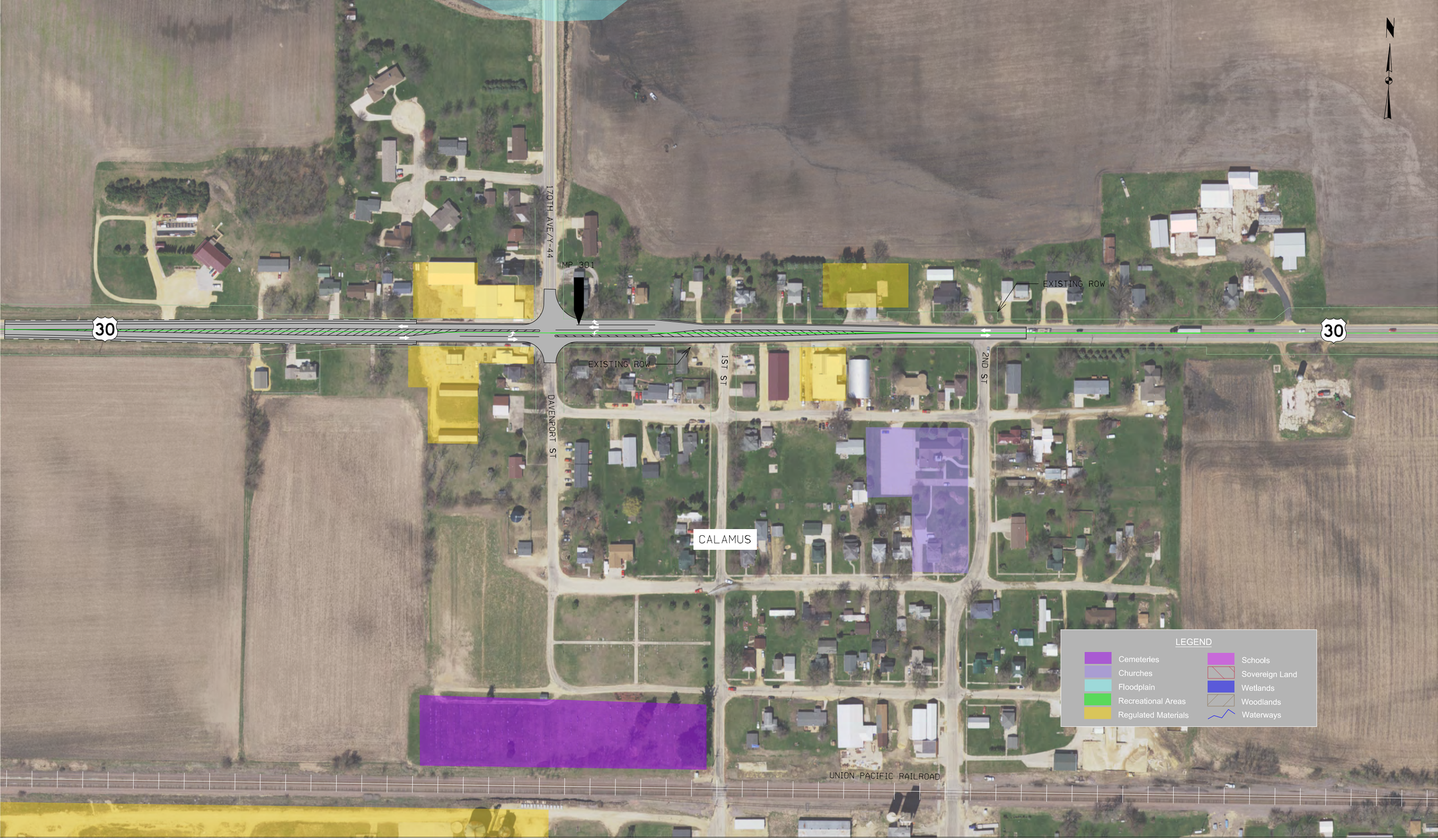
US Highway 30 PEL Study Corridor Super Two Passing Lane Alternatives Calamus Alternative 2	Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

0 FEET 200

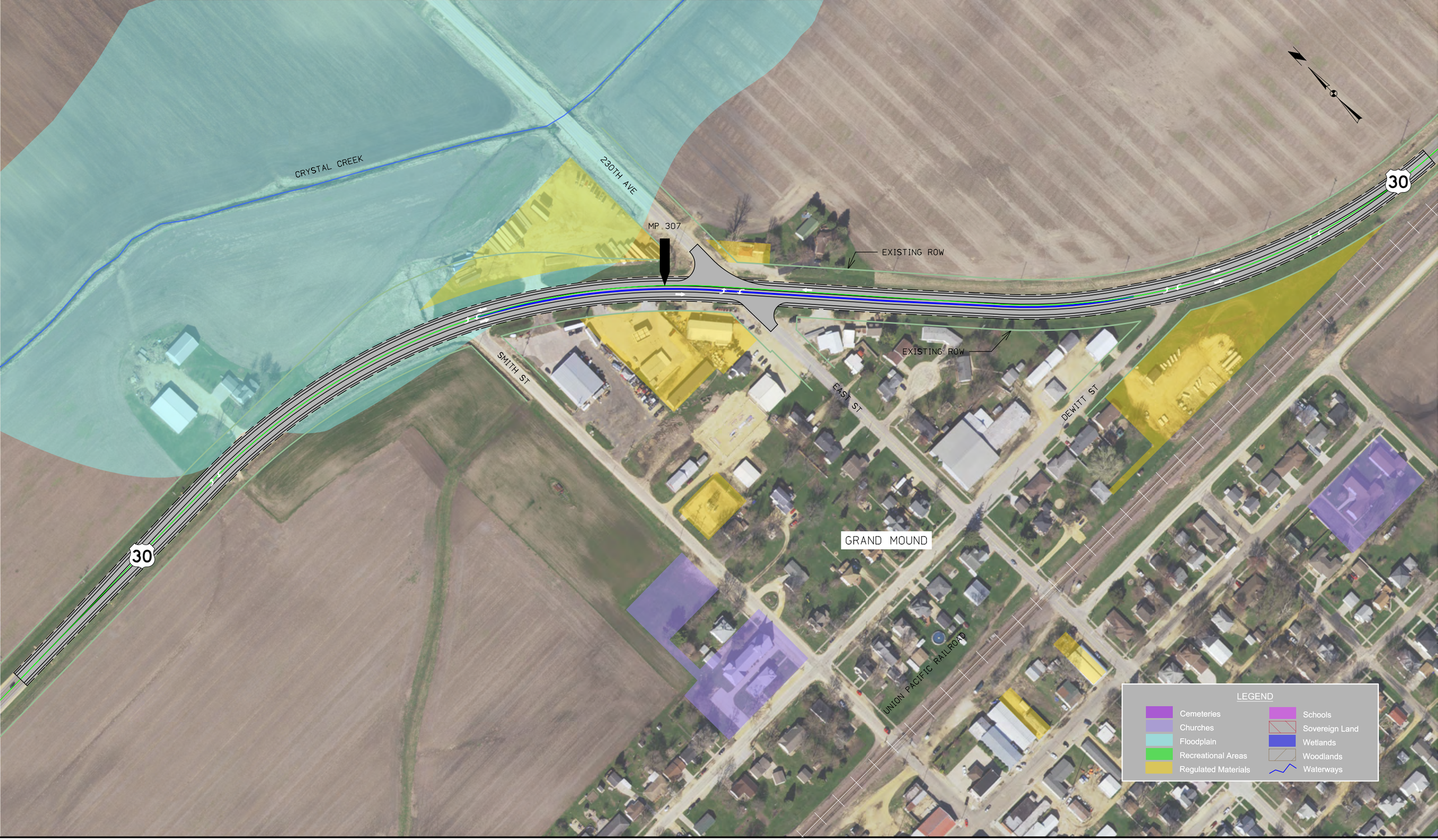
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Calamus Alternative 3

MARCH 2020

Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC



IOWADOT

Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Grand Mound Alternative 1

MARCH 2020

Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC

IOWA DOT

Jacobs

0 FEET 200

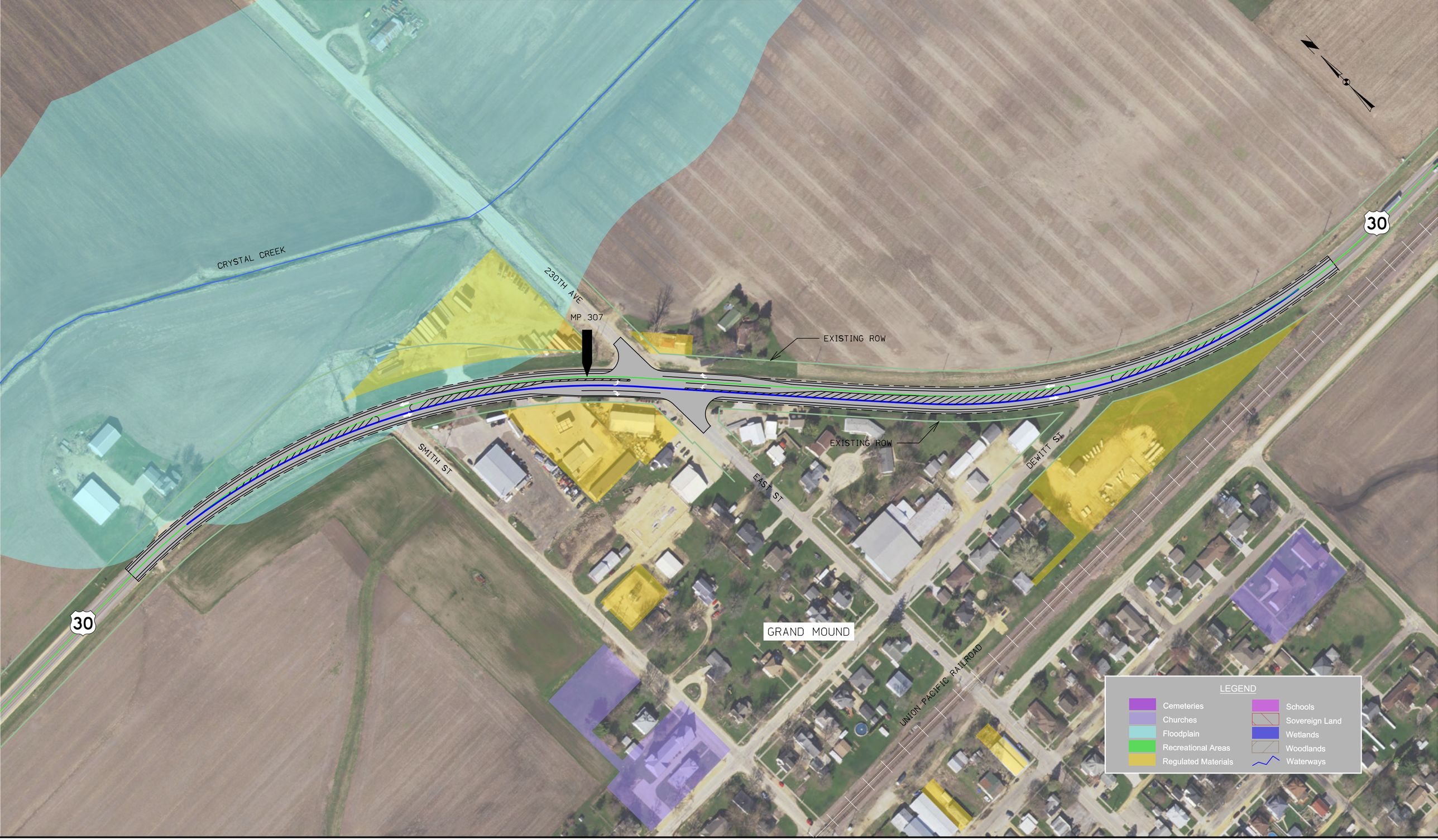
Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Grand Mound Alternative 2

MARCH 2020

Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC



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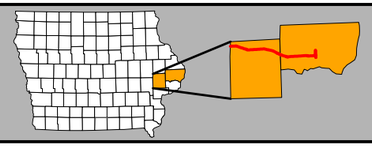


Jacobs

0 FEET 200

Description

US Highway 30 PEL Study Corridor
Super Two Passing Lane Alternatives
Grand Mound Alternative 3

MARCH 2020

Sheet 1 of 1

SYSTEMTIME USERNAME DGNSPEC

APPENDIX H
MAINTENANCE OF TRAFFIC CONSIDERATIONS

MAINTENANCE OF TRAFFIC AND US 30 REALIGNMENT

As part of the US 30 PEL Study alternatives development and evaluation, possible maintenance of traffic needs were considered to aide in the development of narrowed areas of focus for future planning and engineering alternatives study. Two areas were identified where realignment of US 30 may be needed to maintain traffic during construction: at bridge locations and locations where passing lane construction would occur adjacent to railroad right-of-way. Considering these two conditions, the following five sections of the corridor were studied:

- West and east of Mechanicsville (passing lane construction and railroad right-of-way)
- Between Clarence and Lowden (passing lane construction and railroad right-of-way)
- Between Lowden and Wheatland (passing lane construction and railroad right-of-way)
- Between Wheatland and Calamus (bridge construction over the Union Pacific Railroad and Wapsipinicon River)
- East of Grand Mound (passing lane construction and railroad right-of-way)

US 30 CLOSURES AND LOCAL DETOUR ROADWAYS

Given the rural nature of the Study corridor, and the natural and physical constraints within the region, including the UP Railroad and Wapsipinicon River, there are a limited number of paved roadways within the area that could serve as suitable detour routes, and minimize out of distance travel, if US 30 were to be closed during construction. Table H-1 summarizes some of the shortest possible detour routes for each of the five critical sections of the corridor, assuming detour routes would be limited to state and county paved roadways; other detour routes may be viable considerations. Some of these routes would require US 30 traffic traveling through other local communities with reduced travel speeds, using county roadways increased curvature and narrowed travel lanes and shoulders, and possible stop-controlled intersections.

Table H1. POSSIBLE US 30 DETOUR ROUTES

US 30 Section	Possible Paved Detour Route	Estimated Out-of-Distance Travel
Lisbon to Stanwood	IA 1 at Mount Vernon north to Jones County E-45 to Jones/Cedar County X-40 (to Mechanicsville) or IA 38 (to Stanwood)	13 miles (Mechanicsville) to 15 miles (Stanwood)
Clarence to Lowden	Cedar County X-64 at Clarence south to IA 130 to Cedar County Y-14 OR Cedar County X-64 at Clarence north to IA 146 to Cedar County Y-14	15 miles
Lowden to Wheatland	Old Lincoln Highway	< 1 mile

Table H1. POSSIBLE US 30 DETOUR ROUTES

US 30 Section	Possible Paved Detour Route	Estimated Out-of-Distance Travel
Wheatland to Calamus	Clinton County Y-4E south from Wheatland to Scott County Y-42E to Cedar/Scott County Y-52 to US 30	23 miles
Grand Mound to DeWitt	Clinton County Y-54 south from Grand Mound to 255th Street to 260th Street/Y-62	3 miles

US 30 REALIGNMENT OPTIONS

When determining how much deviation from the current highway is needed to maintain traffic during construction at the critical locations in the corridor, factors such as temporary barrier needs, temporary lane and shoulder widths, temporary drainage needs, ultimate roadway crown line location, throwaway construction costs, and environmental and right-of-way impacts need to be considered and balanced.

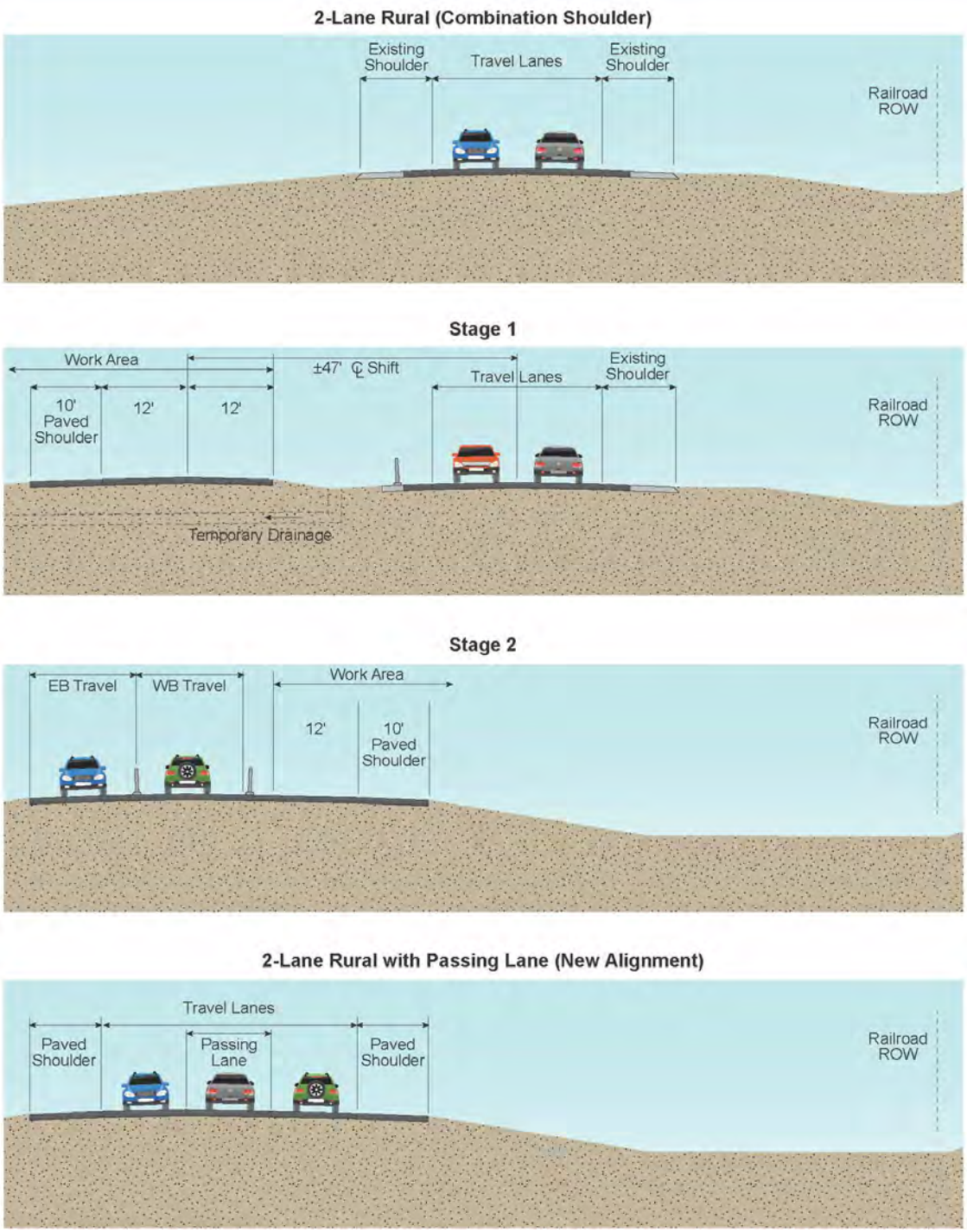
The most critical areas within the Study corridor to consider alignment shifts is between Clarence and Lowden due to US 30 being located between the UP Railroad and Yankee Run Creek. Through this section of US 30 there are multiple box culverts, a bridge, and the meandering Yankee Run Creek channel and associated floodplain. Options for spacing and placement of westbound passing lanes in this section of the corridor may be limited depending on acceptable levels of impact and the need to reconstruct existing bridge and drainage structures.

To begin evaluating the magnitude of roadway realignment that may be required in support of developing a narrowed focus area for future study, two concepts were developed that consider a balance between separation from the railroad and permanent right-of-way need. More detailed analysis in future study will be needed to define the most appropriate US 30 alignment at each individual corridor location that best balances the various factors and constraints noted above.

STAGING OPTION 1

Option 1 (see Figure H-1) considers increasing the separation between US 30 and the UP Railroad with additional permanent right-of-way acquisition. Shifting US 30 away from the railroad by an additional 45 to 50 feet would allow for construction of the majority (two travel lanes and a shoulder) of the new US 30 roadway in the clear while traffic is maintained on the existing highway. Once complete, traffic can be shifted to the new pavement and shoulder while existing US 30 is removed and the remaining travel lane and shoulder are constructed.

Figure H1. SUPER-2 WESTBOUND PASSING LANE CONSTRUCTION STAGING AND ROADWAY REALIGNMENT OPTION 1



STAGING OPTION 2

Option 2 (see Figure H-2) minimizes the additional separation between the improved US 30 highway and the UP Railroad and ultimately lowers the amount of permanent right-of-way required. With this option, traffic is maintained with a parallel detour roadway constructed adjacent to existing US 30. The detour roadway would need to be offset from existing US 30 by 70 to 75 feet, allowing space for temporary drainage and construction considerations. While traffic is on the parallel detour pavement, the improved US 30 highway can be constructed in the clear with the north shoulder line located near the same location as the existing shoulder. While permanent right-of-way acquisition would be minimized, temporary easements would be needed for construction, and overall impacts could be greater than Option 1. Option 2 may also have greater construction throwaway cost associated with the temporary detour compared to Option 1.

Figure H2. SUPER-2 WESTBOUND PASSING LANE CONSTRUCTION STAGING AND ROADWAY REALIGNMENT OPTION 2