



# Precast Concrete Frame Connection

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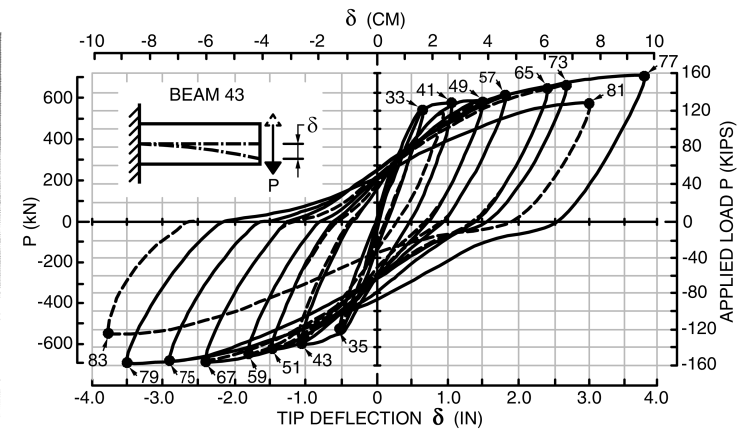
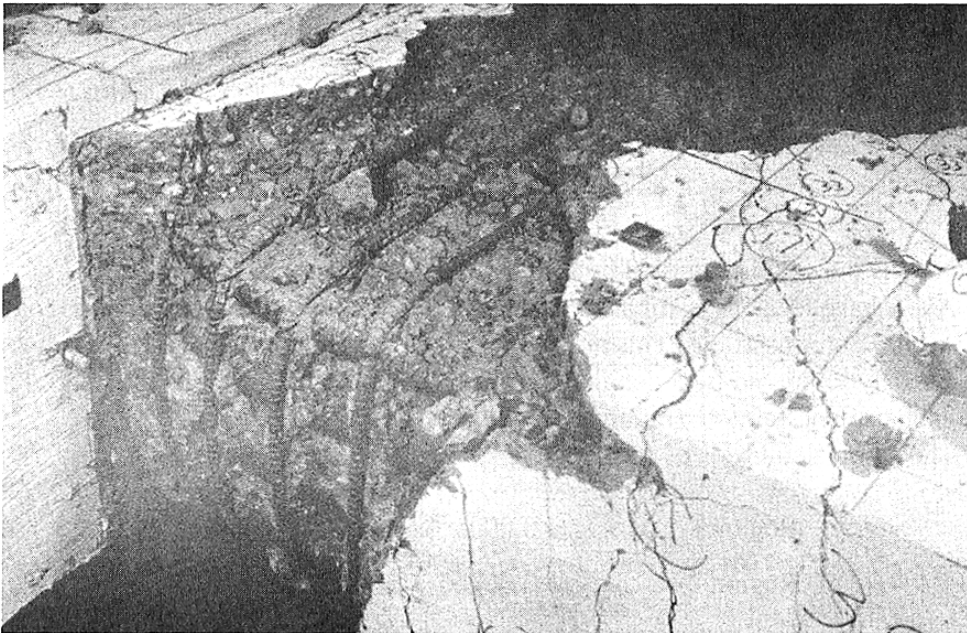
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# Introduction

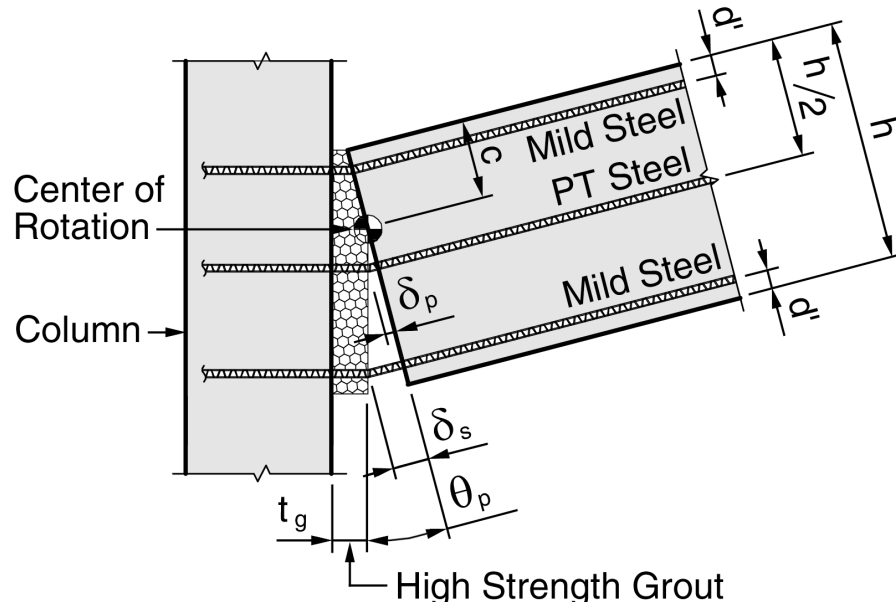
- Traditional RC Ductile Frame Beam-Column Connection



Good ductility but lots of damage

# Alternative Approach – Precast Beam

- Connector absorbs post-yield rotation and limits damage to concrete

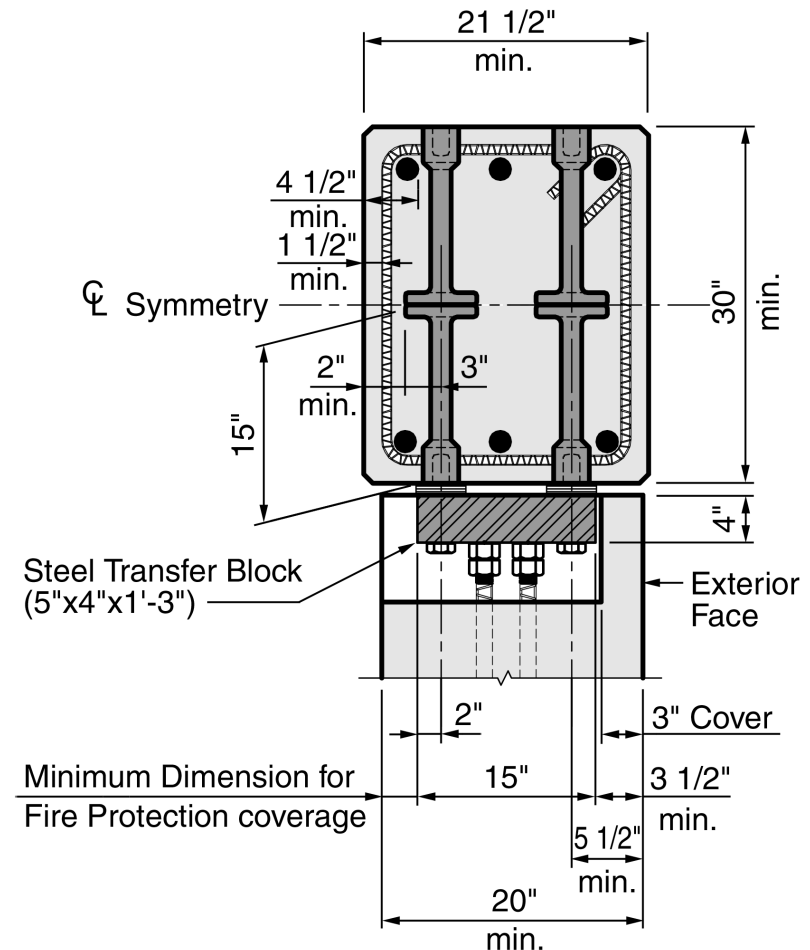
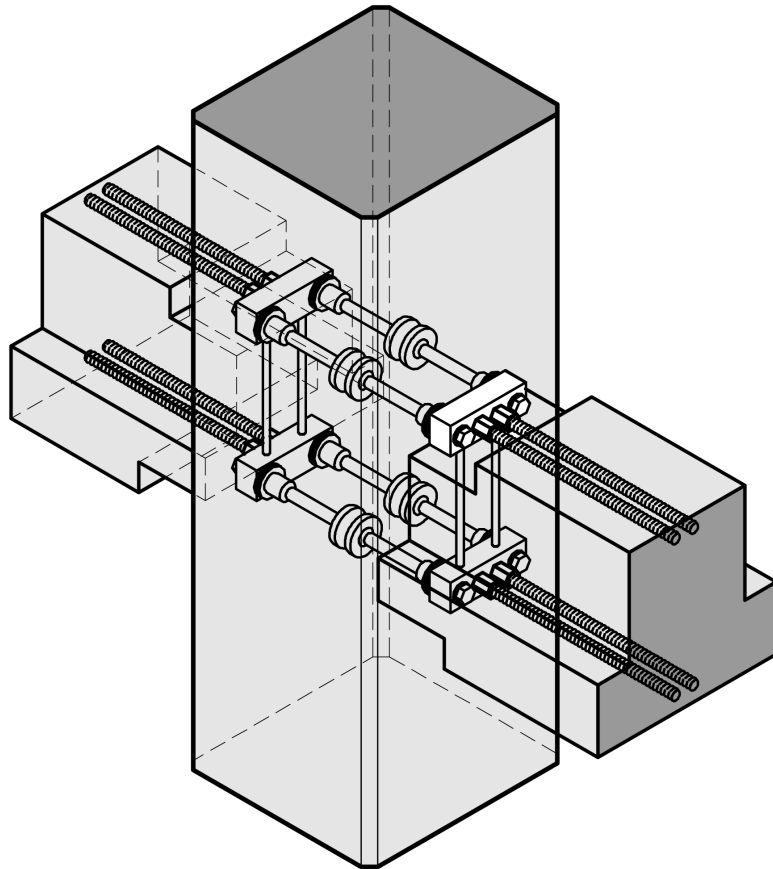


Hybrid Beam



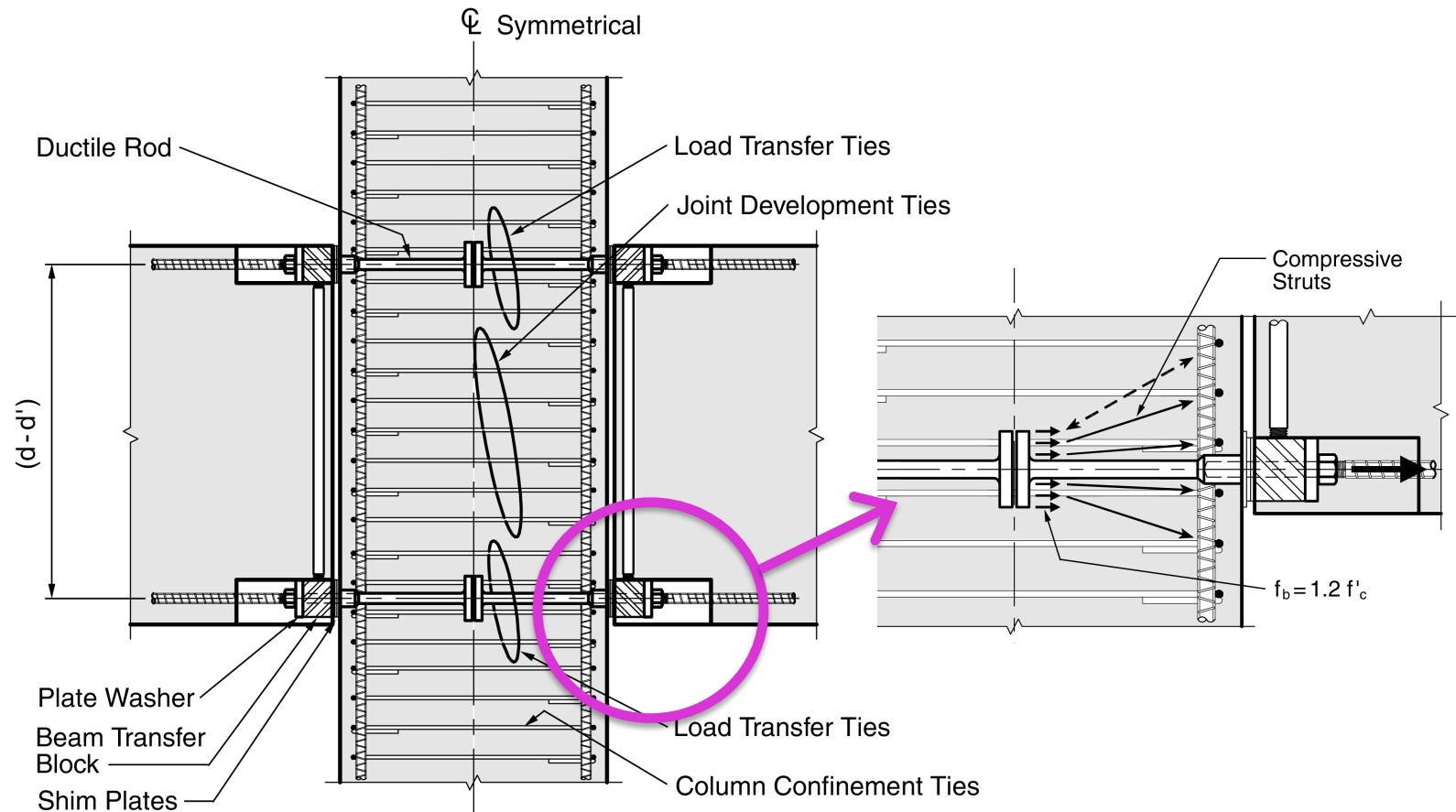
# Alternative Approach – Precast Beam

## ■ Refined Dywidag Ductile Connector (DDC)



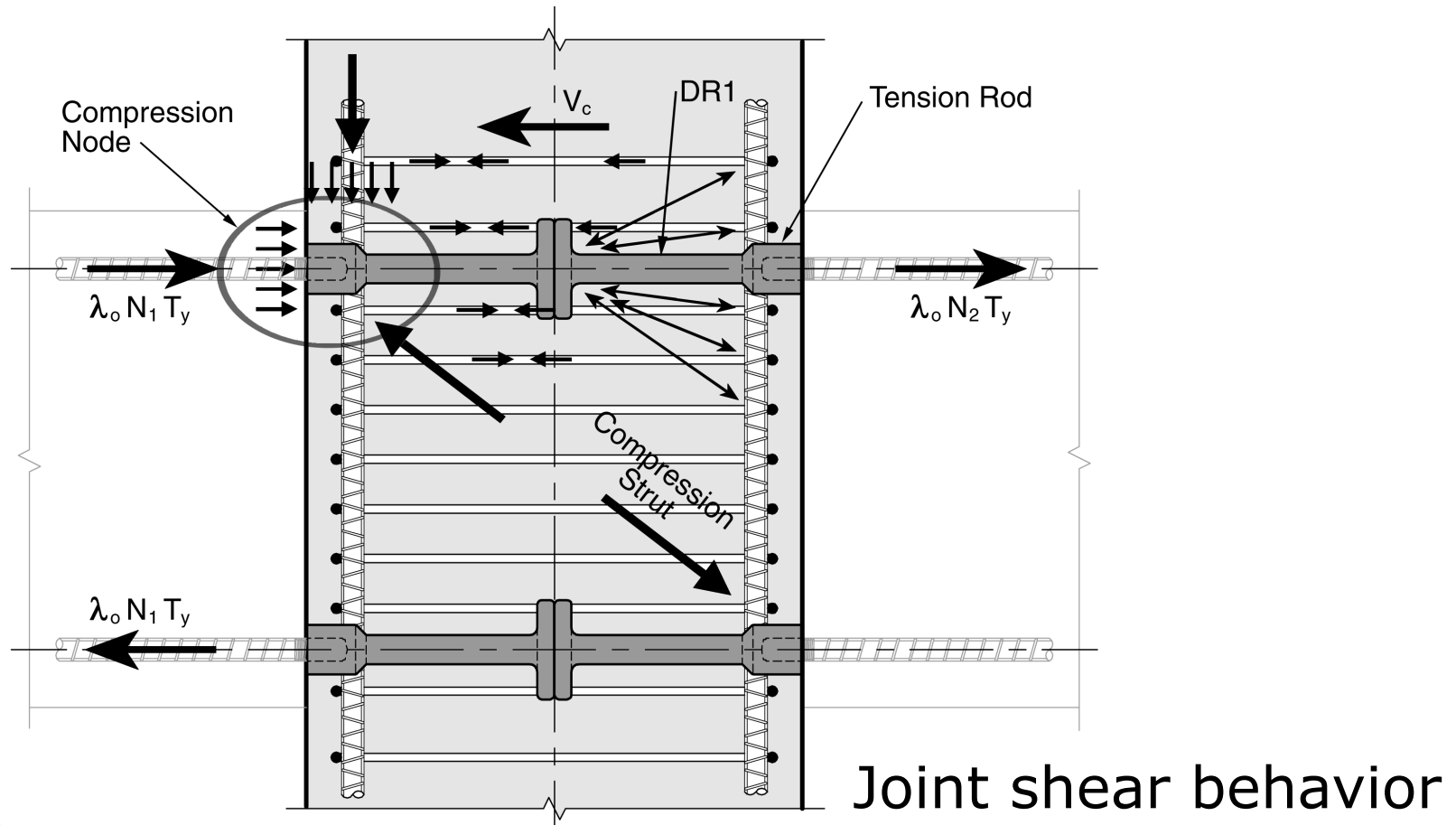
# Alternative Approach – Precast Beam

## ■ Dywidag Ductile Connector (DDC)



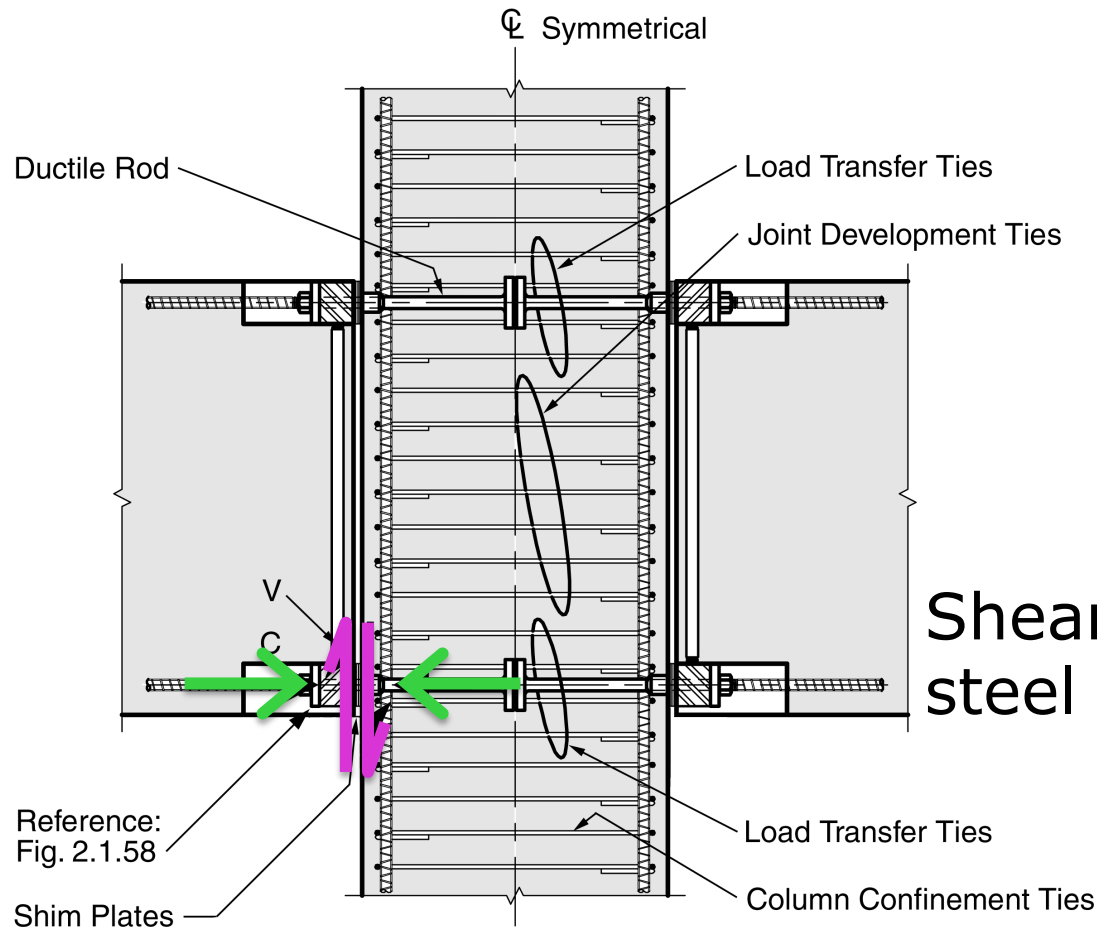
# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC)



# Alternative Approach – Precast Beam

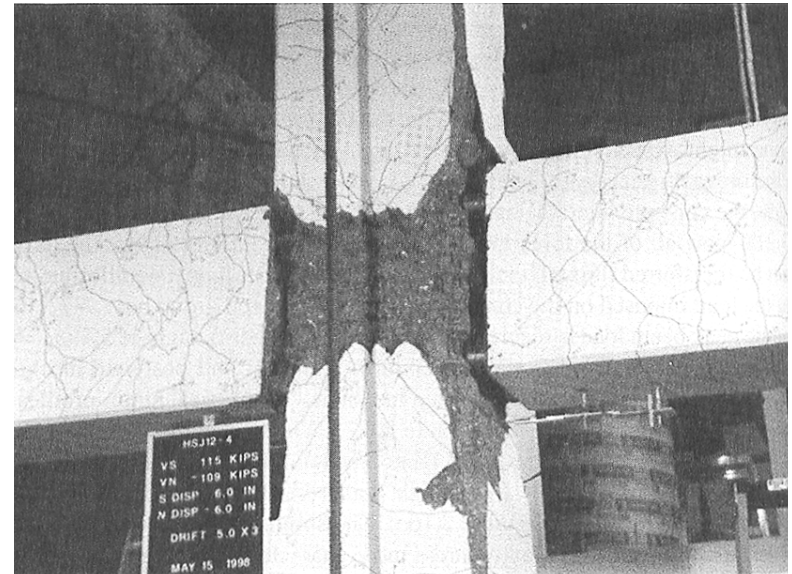
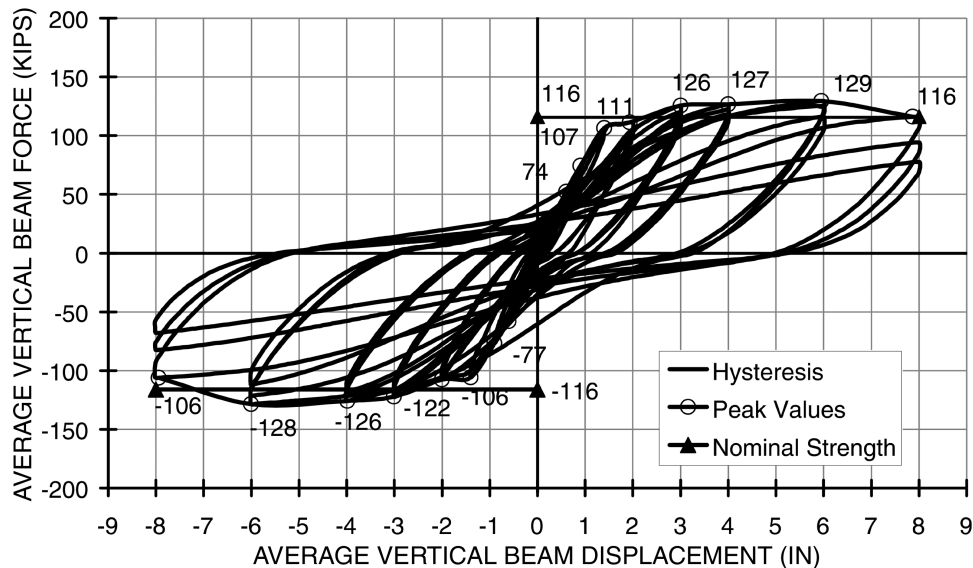
## ■ Dywidag Ductile Connector (DDC)





# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC)



5% Drift (third cycle)

# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC) (modified specimen)



2.65% Drift (first cycle)



7.07% Drift (third cycle)

# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC)



Construction Sequence

# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC)



Construction Sequence

# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC)



Construction Sequence

# Alternative Approach – Precast Beam

- Dywidag Ductile Connector (DDC)



Construction Sequence